Government
Publications

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Ontario, Legislative Assembly

Sessional papers

SESSIONAL PAPERS.

VOL. XIX.—PART VI.

FIRST SESSION OF THE SIXTH LEGISLATURE.

OF THE

PROVINCE OF ONTARIO.

SESSION 1887.

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LIST OF SESSIONAL PAPERS

ARRANGED ALPHABETICALLY.

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Accounts, Public	15	"
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Agricultural Societies, analysis	37	*Not printed.*
Asylums, Report	3	*Printed.*
Births, Marriages and Deaths, Report	2	*Printed.*
Blind Institute, Report	9	"
Bonds and Securities	65	*Not printed.*
Borron, E. B., cases before	64	*Printed.*
Crown Lands, Report of Commissioner	18	*Printed.*
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Dairying at Agricultural College, Report	56	"
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Education, Report of Minister	7	*Printed.*
Education, correspondence	48	*Printed in part.*
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Entomological Society, Report	68	*Printed.*
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Magdalen Asylums, Report	21	*Printed.*
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Parliament Buildings, correspondence	44	"
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No. 3.. Report upon the Lunatic and Idiot Asylums of the Province of Ontario for the year ending 30th September, 1886. (*Printed.*)

No. 4.. Report upon the Ontario Institution for the Education and Instruction of the Deaf and Dumb, Belleville, for the year ending 30th September, 1886. (*Printed.*)

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No. 27.. Return of the Municipal Council of the Township of Yarmouth, of money borrowed during the year 1886, under the Act respecting the investments in Tile Drainage. (*Not printed.*)

No. 28.. Copies of Advertisements, Tenders, Specifications, Contracts, etc., in connection with the erection of the proposed Legislative and Departmental Buildings of Ontario. (*Printed.*)

No. 29.. Return to an Address to His Honour the Lieutenant-Governor, praying that he will, in his capacity as visitor of the Western University of London, Ontario, call upon the Senate of said University, to furnish a full and accurate account of the property of the University, and the income received therefrom, in order that the same may be laid before the Legislature, as directed by section 5, of 41 Vic., cap. 20. (*Not printed.*)

No. 30.. Return shewing the total number of Students in University College at the date of the Order ; the number of female students at the same date, and also, the number of students attending lectures in each of the following subjects :— Greek, Latin, Mathematics, Pyhsics, History, Ethnology, English, French, German, Italian, Spanish, Hebrew, Chaldic, Syriac, Logic, Mental and Moral Science, Biology, Chemistry, Mineralogy and Geology. (*Not printed.*)

No. 31.. Return shewing on a map or plan each timber limit or berth now under license, and each timber limit or berth disposed of at the sale in October last, whether yet under license or not, with the names of the present licensees or owners thereof marked thereon, and the area thereof, and the bonus *per* square mile paid in respect thereof, and the dates when the same were respectively first placed under license. (*Not printed.*)

No. 32.. Return shewing the names of the persons, firms and companies, indebted to the Province on the first day of January, 1886, on account of Timber Dues, Ground Rent, or Bonuses for Timber Limits, the amount of indebtedness in each case, the balance, if any, due by such persons, firms and companies, on the first day of January in each year since 1880. The total amount of such indebtedness on the 1st day of January, 1886. (*Not printed.*)

No. 33.. Return shewing the persons by whom, and the limits or births in respect of which, the bonuses appearing as accruals from Woods and Forests, were payable in each year since 1871, the balances which remain unpaid on account of bonuses on the 31st December, in each year since 1871, with the names of the persons by whom the same were respectively owing, and the amount owed by each of them, and in respect of what limit or berth it was due, and the period during which it had remained unpaid after it became due, the amounts which in each of the said years were allowed to licensees in reduction of the sums owing by them, with the names of the persons to whom the allowances were made, the amount of each allowance and the reasons for making them. (*Not printed.*)

No. 34.. Return of copies of all Orders in Council relating to the sale of timber limits, which took place in October last. The names of the purchasers at the sale, the several limits bought by each purchaser, with the area of each of them, and the bonus *per* square mile agreed to be paid for each such limit. The deposit paid by each purchaser, the amount since paid on each purchase, and the nature of the security, if any, given for the residue of the price. The several limits which had been bid off at the sale which took place in October, 1872, and the price *per* square mile at which they were severally bid off at that sale. The names of all purchasers who have failed to comply with the conditions of sale. The names of all purchasers who have transferred their claims to other persons with the names of the transferees and dates of transfers to them respectively. The several limits, if any, put up for sale and not sold and the disposition since made of them and the authority under which such disposition was made. (*Printed.*)

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No. 37.. Analysis of Reports of County and Township Agricultural Societies and of Horticultural Societies for the year 1885, in accordance with the provisions of sections 47 and 48, chapter 35, R. S. O. (*Not printed.*)

No. 38.. Regulations respecting Mechanics' Institutes and Art Schools. (*Not printed.*)

No. 39.. Correspondence respecting the land and timber in the recently Disputed Territory of the Province. (*Printed.*)

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No. 42.. Return from the Queen's Printer as to the disposal of the Statutes of Ontario for the year 1886. (*Not printed.*)

No. 43. Return shewing what application has been made for payments out of the Consolidated Revenue, under the provisions of Sec. 4, cap. 4, 43 Vic., in respect of the dues on pine trees. Also, shewing what is the aggregate sum which, up to the first day of March last, the patentees of lands subject to the provisions of the Act, are entitled to receive out of the dues collected on pine trees cut after date of their Patents. (*Not printed.*)

No. 44.. Return giving copies of all correspondence with the Architect, Mr. Waite, concerning the plans prepared by him for the proposed new Parliament and Departmental Buildings, and any agreement made with him concerning his remuneration as such Architect. (*Printed.*)

No. 45.. Statement of the Returns forwarded to the office of the Provincial Secretary of all the Fees and Emoluments received by the Registrars of Ontario for the year 1886, made in accordance with the provisions of the R. S. O. Cap. 111, Sec. 97 and 43 Vic., Cap. 3, Sec. 2, with which are contrasted receipts of same nature in 1884 and 1885. (*Printed.*)

No. 46.. Statement in detail of receipts and expenditures on account of the Mercer Estate for the year 1885. (*Not printed.*)

No. 47.. Statement in detail of receipts and expenditures on account of the Mercer Estate for the year 1886. (*Not printed.*)

No. 48.. Copies of all correspondence, papers and reports, between the Department of Education and William S. Summerby and O. Dufort, Inspectors of Public Schools, in the United Counties of Prescott and Russell, during the last year, on the subject of Public Schools in the French Settlements of these Counties. Also, copies of all reports respecting the alleged difficulties between the English and French ratepayers of the town of L'Orignal, or, upon the propriety of establishing a Separate School for Protestant children in that town. (*Printed in part.*)

No. 49.. Return of copies of all correspondence subsequent to the year 1882, between the Department of Public Works and any person or persons with reference to the regulation of the waters of Lakes Simcoe and Couchiching, together

with the reports of the Engineer, shewing the amount expended in removing obstructions from the outlets of the lakes and also the condition in which the outlets are at the present time. (*Not printed.*)

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No. 53.. Detailed statement of the expenditure from the Poor School Fund for the years 1885 and 1886, with the sections and townships in which the expenditures were made; the rate on the dollar paid by the section in each year, with the length of time such schools were open, and the amount of aid, if any, received from County or Township municipality. (*Printed.*)

No. 54.. Return shewing the indebtedness of any Municipality to the Government, whenever the same may be in arrears for over one year, either on account of principal or interest. (*Printed.*)

No. 55.. Statement of Cash Transactions on account of Upper Canada College for the year ending 30th June, 1886. (*Printed.*)

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No. 58.. Return giving copies of correspondence, etc., between the Government and Messieurs Gordon and Helliwell, respecting plans, etc., of the new Parliament Buildings, subsequent to that brought down in the Session of 1882, and being Sessional Papers No. 40, of that Session. (*Printed.*)

No. 59.. Report upon the Division Courts of Ontario. (*Printed.*)

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No. 61.. Report of the Master of Titles. (*Printed.*)

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No. 63 Return shewing when the vacancy in the office of the Clerk of the Division Court at Picton occurred. (*Not printed.*)

No. 64..	Return shewing the number of cases brought before E. B. Borron, Stipendiary Magistrate for Northern Nipissing, for adjudication during each year since his appointment; and shewing also, the other duties performed by him in each year. (*Printed.*)
No. 65..	Detailed Statement of all Bonds and Securities recorded in the Provincial Secretary's office, since the last return submitted to the Legislative Assembly, made in accordance with the provisions of the Statute. (*Not printed.*)
No. 66...	Statement of the Assets, Liabilities, Revenue, etc., of the municipalities within the several Counties in the Province for the year 1885. (*Not printed.*)
No. 67..	Return shewing the number of votes polled by widows and unmarried women in the municipalities of the Province at the late municipal elections. (*Not printed.*)
No. 68..	Report of the Entomological Society for 1886. (*Printed.*)
No. 69..	Return shewing the agreement entered into between the Province and the Roman Catholic Episcopal Corporation of the Diocese of Kingston for the use of the building known as Regiopolis College. The amount expended for repairs and improvements, made at the expense of the Province, upon the building. (*Printed.*)
No. 70..	Report of the Inspector of Legal Offices. (*Printed.*)

CORRESPONDENCE.

With regard to a conference of Provincial Ministers to consider questions affecting the Autonomy of the Provinces, and their financial arrangements with the Dominion.

Presented to the Legislative Assembly.

By Command.

A. S. HARDY,
Secretary.

Provincial Secretary's Office,
1st April, 1887.

CORRESPONDENCE.

QUEBEC, 8th March, 1887.

Hon. O. MOWAT,
Premier of Ontario.

HONOURABLE SIR,—The Government of the Province of Quebec deems it to be its duty to invite the attention of the Governments of the other Provinces to two questions, which, in its opinion, call for immediate solution.

These two questions relate to the autonomy of the Provinces and their financial arrangements with the Dominion.

The centralizing tendencies, manifested of late years by the Federal Government, and favoured by the obscurity—in some respects—of the British North American Act, 1867, have aroused legitimate fears with regard to the maintenance of our local institutions, and render it imperative that there should be an understanding between the Provincial Governments with a view to the organization of a system of common defence.

The experience of the twenty years which have elapsed since the establishment of Confederation, have demonstrated the inadequacy and injustice of the financial arrangements made at the start.

When they entered the Confederation, the four Provinces of which it was originally composed, gave up to the central power their customs and excise revenues, which then amounted to nearly $12,000,000, and which have since more than doubled, receiving in return only an annual subsidy which amounted at the outset to but $2,753,966, and which in 1885, had not yet attained a higher figure than $3,343,799.

While the Provinces thus relinquished the clearest and most important of their sources of revenue, they remained burtherned with heavy expenses for the support of their Governments and their local institutions, and these expenses necessarily increase with the growth of their populations and the development of the country.

This abnormal state of things has forced certain Provinces to run heavily into debt, and has made it impossible for others to develop their resources as they would have desired.

Under these circumstances, the Government of Quebec believes that the time has come to seriously grapple with the situation and to consult as to the best means of remedying the difficulties of the present, and of preventing their recurrence in the future.

To attain this end this Government would respectfully suggest the desirability of a meeting of delegates representing all the local Governments to be held at such time and place as may be hereafter agreed upon.

Will you be good enough to inform me as soon as possible of your Government's views on this subject?

I have the honour to be,

Mr. Premier,

Yours most respectfully,

HONORÉ MERCIER.

TORONTO, 15th March, 1887.

DEAR SIR,—I have your letter of the 8th, and it has been considered by my colleagues and myself. We concur in what you say with reference to the autonomy of the Provinces, and the importance of resisting encroachments on Provincial rights.

With regard to financial arrangements, this Province was satisfied with the provisions of the British North American Act, and would still prefer them to any change, if the principle on which they are based were faithfully carried out by the Dominion Parliament with the approval of all the Provinces. In view of the financial condition of some of the Provinces, and of what has occurred since Confederation this Government will be glad to consider and discuss any changes which may be proposed by any of the Provinces.

We approve of your proposal for a meeting of delegates representing, if possible, all the local Governments of the Dominion with respect to both subjects. The place might be your own City of Quebec, and the time an early day in May.

Yours truly,

O. MOWAT.

The Honourable HONORÉ MERCIER,
Premier of Quebec,
Quebec.

RETURN

To an Order of the Legislative Assembly passed on the 1st day of March, 1886, for a Return giving copies of the Minutes of the Senate of the University of Toronto, from the date of the last Return to the present time.

A. S. HARDY,
Secretary.

OFFICE OF THE PROVINCIAL SECRETARY,
TORONTO, April 5th, 1887.

(*Mr. McLaughlin*).

RETURN OF A COPY OF THE MINUTES OF THE SENATE OF THE UNIVERSITY OF TORONTO, FROM THE 21st DAY OF JANUARY, 1881, TO THE 9th DAY OF JUNE, 1886, INCLUSIVE.

Minutes of a meeting of the Senate held at the Senate Chamber, January 21st, 1881, to elect a Vice-Chancellor in the place of the late Chief Justice Moss.

Present:—Dr. Wilson, Mr. Crickmore, Principal Cockburn, Dr. Ogden, Hon. Mr. Justice Morrison, Dr. Larratt W. Smith, Prof. Chapman, Mr. Taylor, Dr. McFarlane, Mr. Mulock, Dr. Richardson, Mr. Bethune, Prof. Loudon, Dr. Graham, Mr. King, Mr. Woods, Mr. Campbell, Rev. Principal Caven, Rev. Mr. Macdonnell, Hon. Mr. Justice Patterson, Mr. McMahon, Mr. Macdonald.

Moved by Dr. Larratt Smith, seconded by Mr. Crickmore: That Dr. Wilson take the Chair.—*Carried.*

Moved by Dr. Wilson, seconded by Mr. Justice Patterson, and carried.

Resolved, That the Senate avails itself of this the first meeting since the death of the Vice-Chancellor, the Honourable Chief Justice Moss, to record its sense of the great loss which this University has sustained by the death of one so honourably associated with all its later history. After winning the highest academic distinctions, he rendered it faithful and valuable service as Registrar, Examiner, and Vice-Chancellor. When at an exceptionally early age he had gained such pre-eminent distinction at the Bar that, with universal approval he was promoted to the highest judicial office in the Province, he continued to prosecute the duties of Vice-Chancellor with unabated zeal. By his genial courtesy, conscientious uprightness, and the liberal comprehensiveness which he brought to bear on every question affecting the interests of higher education, he won for himself a claim to gratitude which must ever identify his name with the University, on which he has reflected lustre, alike by his great gifts and by the wise uses to which they have been directed. He will live enduringly in the memory of the graduates as a noble example for their imitation.

To the widow and orphans of their late Vice-Chancellor, the members of the Senate beg leave very respectfully to tender their deepest sympathy in their irreparable loss; while they doubt not that the memory of one who was not less distinguished by kindliness of heart than by great intellectual gifts, will be a precious treasure to the survivors, and a noble incentive to his sons.

Moved by Principal Cockburn, seconded by the Hon. Mr. Justice Patterson, and carried.

Resolved, That in grateful evidence of the admiration in which the late Vice-Chancellor, Chief Justice Moss, is held, and with a view to establish a lasting memorial of his worth in connection with the University with which his name is so honourably identified, the friends and admirers of the late Chief Justice be invited to unite in founding a University Scholarship which shall bear his name, and be annually awarded to the most distinguished student in one of the Departments with which his own name is associated in the lists of the Honour Men of this University; and that a statute be introduced at the next meeting of the Senate to admit his sons to all the privileges of Upper Canada College and of the University, exempt from any fees;

That copies of the resolutions now adopted be forwarded by the Registrar to Mrs. Moss.

Moved by Dr. Oldright, seconded by Mr. Bethune, That Mr. Justice Cameron be appointed Vice-Chancellor of the University.

Mr. Justice Cameron declined the nomination, which was accordingly withdrawn.

Moved by Mr. Justice Patterson, seconded by Dr. Richardson, That Mr. Mulock be appointed.

Moved by Mr. King, seconded by Mr. Campbell, That Dr. Wilson be appointed.

Moved by Rev. Principal Caven, seconded by Dr. Ogden, That Mr. Taylor be appointed.

The vote was then taken with the following result :—

For Mr. Mulock—Patterson, Morrison, Cameron, Smith, Macmahon, Crickmore, Richardson, McFarlane, Graham, Woods, Cockburn—11.

For Dr. Wilson—Campbell, King, Macdonald, Macdonnell—4.

For Mr. Taylor—Bethune, Ogden, Caven—3.

Moved by Dr. Wilson, seconded by Mr. Taylor, That the election of Mr. Mulock as Vice-Chancellor be made unanimous.—*Carried.*

Mr. Falconbridge tendered his resignation as Registrar of the University.

The Senate then adjourned to the call of the Chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, Friday, January 28th, 1881.

Present :—The Vice-Chancellor, the President, Mr. Crickmore, Mr. Cockburn, Dr. Fulton, Dr. Ogden, Mr. Wells, Mr. McMurchy, Dr. Croft, Mr. Langton, Dr. Smith, Mr. Taylor, Dr. Oldright, Judge Boyd, Mr. Gibson, Dr. Richardson, Mr. Bethune, Prof. Loudon, Dr. Thorburn, Mr. King, Rev. Prin. Caven, Mr. Justice Patterson.

Letters were read (*a*) from undergraduates and others mentioned in the report of the Committee on Applications and Memorials ; (*b*) from St. Michael's College respecting affiliation ; (*c*) from the College Registrar, notifying the Senate that Prof. Chapman has become the College Representative on the Senate in place of Mr. Pearman ; (*d*) from Prof. Chapman as to text-books in Mineralogy and Geology ; (*e*) from Messrs. Culham, Ponton, Brown, Manly and Vandersmissen, applying for the position of University Registrar in the place of Mr. Falconbridge, resigned.

Mr. Justice Patterson gives notice of the following motion :—

That the Librarian for the time being be also Registrar, and that the salary now attached to the office of Registrar, be added to his salary as Librarian.

Mr. King gives notice that he will, at the next meeting of the Senate, move to introduce a statute regulating the mode of election to the offices of Vice-Chancellor, Registrar and Solicitor of the University.

Dr. Wilson, seconded by Mr. Cockburn, moved the first reading of the following statute :—

By the Senate, etc., be it enacted,—

That in view of the great services rendered to the University and to Upper Canada College by the late Vice-Chancellor, Chief Justice Moss, his sons shall be admitted to all the privileges of students of the College and of this University without payment of any of the fees ordinarily enacted.—*Carried.*

Moved by Dr. Wilson, seconded by Dr. Richardson, That the Vice-Chancellor, Mr. Taylor, Prof. Loudon and the mover, be a committee to meet the representatives of St. Michael College, to consider and report on the terms of affiliation of the College with this University.

Moved by Mr. Gibson, seconded by Dr. Oldright, That the statutes of the University now in force, and of general application, be revised and consolidated, and that the work of such revision and consolidation be performed under the supervision of a committee consisting of the Vice-Chancellor, the President, Prof. Loudon, Mr. Taylor, Dr. Oldright, and the mover, and that such committee have power to expend a sum not exceeding $40, in obtaining clerical assistance in the matter.—*Carried.*

The Senate adjourned until Wednesday and Thursday, 2nd and 3rd February, prox.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, February 2nd, 1881.

Present:—V. C. Mulock, the President, Mr. Crickmore, Principal Cockburn, Dr. Fulton, Mr. Wells, Mr. McMurchy, Mr. Langton, Mr. Taylor, Dr. McFarlane, Dr. Oldright, Prof. Loudon, Dr Thorburn, Dr. Graham, Mr. King, Mr. Campbell.

R. E. Cooper was then admitted to the degree of M.B.

The Vice-Chancellor moved the reading of the Statute appointing a Registrar, seconded by Dr. Wilson.—*Carried.*

Moved by Mr. King, seconded by Dr. Wilson, That the Statute regulating the election of Vice-Chancellor, Registrar and Solicitor of the University, be read the first time.—*Carried.*

Dr. Wilson, seconded by Mr. Cockburn, Moved that the Statute respecting the sons of the late Chief Justice Moss be read a second time and passed.—*Carried.*

Moved by Mr. King, seconded by Mr. Langton, That in the case of three or more candidates being nominated for the office of Registrar, the candidate having the lowest number at the first vote shall be struck off, and so on until one obtains the final majority; but it shall be in order to move in succession any of the candidates so struck off in amendment against the candidate having the previous majority.—*Carried.*

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, February 3rd, 1881.

Present:—V. C. Mulock, Dr. Wilson, Mr. Crickmore, Principal Cockburn, Dr. Fulton, Prof. Wells, Mr. McMurchy, Mr. Langton, Dr. L. W. Smith, Prof. Buckland, Prof. Chapman, Mr. Taylor, Dr. McFarlane, Dr. Oldright, Judge Boyd, Dr. Richardson, Mr. Bethune, Prof. Loudon, Dr. Thorburn, Dr. Graham, Mr. Campbell, Mr. Justice Patterson, Mr. Macdonald.

Moved by the Vice-Chancellor, seconded by Mr. Langton, That Dr. L. W. Smith be appointed on the Board of Management in the place of Mr. Mulock, who has become an *ex-officio* member.—*Carried.*

Moved by the Vice-Chancellor, seconded by Dr. Wilson, That it having been determined to establish in the University a scholarship, which in remembrance of the late Chief Justice Moss shall bear his name, a committee consisting of Mr. Justice Patterson, Mr. Crickmore, Dr. L. W. Smith, Dr. Wilson, Dr. Oldright, and the mover, be authorized to receive subscriptions for the purpose in question.—*Carried.*

Moved by Dr. Wilson, seconded by Prof. Wells, That it be referred to a committee consisting of the Vice-Chancellor, Mr. Justice Patterson, Prof. Loudon, Mr. Gibson, Mr. Wells and the mover, to report to the Senate on the admission of lady candidates to degrees in Arts in the University on the same examinations as are now in force for the degrees of B.A. and M.A.—*Carried.*

Moved by Mr. Langton, seconded by Dr. Wilson, that the Vice-Chancellor, Dr. Wilson, Mr. Cockburn, Dr. Richardson, Mr. Taylor and the mover, be appointed a committee to confer with the Law Society and the relatives of the late Vice-Chancellor as to the best means of doing honour to his memory by a becoming funeral service on the arrival of his remains from abroad.—*Carried.*

Dr. Richardson, seconded by Mr. Crickmore, moved the first reading of the Statute respecting the salary of the University Registrar.—*Carried.*

Moved by Judge Boyd, seconded by Dr. McFarlane, that the blank in the Statute appointing a Registrar, be filled up with the name of W. H. Vandermissen.

Moved by Mr. Taylor, seconded by Mr. McMurchy, That it be filled up with the name of Alfred Baker.

Moved by Mr. Crickmore, seconded by Dr. Thorburn, That it be filled up with the name of E. B. Brown.

A vote was taken with the following result:

Vandermissen—Patterson, McFarlane, Boyd, Oldright, Richardson, Graham—6.

Baker—Langton, Campbell, Loudon, Chapman, Smith, Cockburn, Taylor, Buckland, McMurchy, Wilson—10.

Brown—Crickmore, Thorburn, Wells, Fulton—4.

A vote was then taken on the names of Mr. Vandersmissen and Mr. Baker, with the following result:

Vandersmissen—Patterson, McFarlane, Boyd, Oldright, Richardson, Wells, Fulton—7.

Baker—Langton, Crickmore, Campbell, Loudon, Chapman, Smith, Cockburn, Thorburn, Taylor, Buckland, McMurchy, Wilson—12.

Moved by Mr. Justice Patterson, seconded by Judge Boyd, That the appointment be made unanimous.—*Carried.*

Moved by the Vice-Chancellor, seconded by Dr. Oldright, That in accepting the resignation of W. G. Falconbridge, as Registrar of this University of Toronto, the Senate desires to place upon record its appreciation of the ability with which, during a period of over eight years, he has discharged the important duties which devolved upon him: and that a copy of this resolution be forwarded to him.—*Carried.*

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held at the Senate Chamber, February 28th, 1881.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. McMurchy, Prof. Buckland, Prof. Chapman, Mr. Taylor, Dr. Oldright, Judge Boyd, Prof. Loudon, Mr. King, Rev. Principal Caven.

Moved by the Vice-Chancellor, seconded by Mr. McMurchy, That Mr. F. W. Kerr, B. A., be appointed examiner in classics in the room of Mr. Wallace.—*Carried.*

The appointment of an examiner in Mineralogy and Geology was deferred.

Moved by the Vice-Chancellor, seconded by Dr. Wilson, That the following gentlemen be added to the committee for conferring with the authorities of St. Michael's College, on the subject of the affiliation of that College with the University of Toronto:—Rev. Principal Caven, Rev. D. J. Macdonnell, Mr. Justice Patterson, Mr. Justice Cameron, Prof. Chapman, Dr. Oldright, Mr. Macdonald, Mr. Gibson, Dr. Fulton, Mr. King, Hon. Wm. McMaster, Mr. Bethune, Mr. McMurchy.—*Carried.*

T. C. Milligan, 4th year, Arts, and E. P. Davis, of the 3rd year, Arts, were introduced and presented with the Medals, the gift of His Excellency, the Governor General, Mr. Milligan receiving the Gold, and Mr. Davis the Silver.

The Senate adjourned to Friday, March 4th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held at the Senate Chamber, March, 4th, 1881.

Present:—The Vice-Chancellor, Prof. Buckland, Dr. Wilson, Dr. Fulton, Mr. McMurchy, Mr. Langton, Prof. Chapman, Mr. Taylor, Dr. Oldright, Prof. Loudon.

Dr. Wilson presented the following report of the Committee, on the Admission of Lady Candidates:

"The Committee appointed to consider the question of the admission of women to Degrees, beg leave to report the following recommendations for the approval of the Senate:

"That in the Faculty of Arts, the examinations, together with the Medals and Prizes, the Certificates of Honour, Scholarships and Degrees, shall be open to women on the same

conditions as to men, excepting that it shall not be imperative on them to attend lectures in an affiliated college; and that any woman gaining a scholarship, before receiving the same, shall sign an engagement that the money shall be expended by her in the further prosecution of the studies prescribed by this University, as necessary for the Degree in Arts."

The report was adopted on motion of Dr. Wilson, seconded by Prof. Loudon.

Moved by the Vice-Chancellor, seconded by Prof. Loudon, that Mr. Langton and Mr. Justice Morrison be added to the Committee on "Affiliation of St. Michael's College."—*Carried.*

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of meeting of the Senate, held at the Senate Chamber, March 9th, 1881.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr McMurchy, Mr. Langton, Prof. Buckland, Mr. Taylor, Dr. McFarlane, Dr. Oldright, Rev. Principal Cavan.

Dr. Wilson, seconded by Mr. Crickmore, moved the first reading of the following Statute:

By the Senate, &c.

Be it enacted, That in the Faculty of Arts the examinations, together with the Medals and Prizes, the Certificates of Honour, and Degrees, are open to women on the same conditions as to men, excepting that it is not imperative on them to attend lectures in an affiliated College; and any woman gaining a Scholarship, shall sign an engagement that the money will be expended by her in the further prosecution of the studies prescribed as necessary for a degree in Arts.

The Vice-Chancellor presented the following report on the affiliation of St. Michael's College:—

The Committee appointed by the Senate to meet with the representatives of St. Michael's College, to consider whether a basis can be established whereby that College can be affiliated to the University of Toronto, beg leave to report that after several interviews, and a careful consideration of various propositions submitted to this Committee, a plan has been proposed, based on the system in use in the University of London, and a Memorandum drawn up by the representatives of St. Michael's College for consideration.

Your Committee beg leave to submit to the Senate the memorandum in question, herewith appended; and to recommend it for adoption by the University as a satisfactory solution of the difficulties suggested at an earlier stage, and a basis on which the affiliation of St. Michael's College may be carried out.

W. MULOCK,
Vice-Chancellor.

MEMORANDUM.

Scheme of Affiliation of St. Michael's College with the University of Toronto.

1st. St. Michael's College is to be a College in affiliation with the University of Toronto.

2nd. In the Sub-Department of History (Mediæval and Modern) no authors are to be specified in the University curriculum. The periods of History embraced in the University curriculum are to be the subjects of examination, without necessary reference to any particular authors, and Examiners are to be instructed by the Senate to so conduct examinations as to carry out the spirit of this Memorandum.

3rd. In the department of Mental and Moral Science, and Civil Polity, no authors are to be specified in the University curriculum. The questions will have no necessary reference to any one author or school of authors. In matters of opinion, answers will be judged according to their accuracy of thought and expression.

(Signed) J. J. CASSIDY, M.D.,
J. R. TEEFY,
D. A. O'SULLIVAN, M.A., LL.B.
(Per J. R. T.).

The Report was adopted on motion of the Vice-Chancellor, seconded by Rev. Principal Caven.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The "Instructions for Examiners and Examinations" were amended as follows:—

(1) The latter part of VII. to read, "nor are the Examiners to be guided in determining the value of the answers by any special religious opinions or arguments therein introduced."

(2) VIII. to be "In the Department of Mental and Moral Science and Civil Polity, questions shall have no necessary reference to any one author or school of authors. In matters of opinion, answers are to be judged according to their accuracy of thought and expression."

Dr. Wilson gave notice that at the next meeting of the Senate he would introduce a statute to amend the curriculum in Arts, by omitting the text-books in the Department of Mental and Moral Science and Civil Polity, and in History.

The Senate adjourned to Friday, March 11th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, March 11th, 1881.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Dr. Fulton, Mr. Langton, Dr. Oldright.

Moved by Dr. Wilson, seconded by the Vice-Chancellor, That a committee, composed of Dr. Oldright, Prof. Loudon and Prof. Chapman, be requested to report on changes in the Arts Curriculum.—*Carried.*

Moved by the Vice-Chancellor, seconded by Dr. Wilson, That the following Statute be read a first time:—

By the Senate, etc., be it enacted,—

That St. Michael's College be and the same is hereby affiliated with the University of Toronto.—*Carried.*

Moved by Dr. Wilson, seconded by Mr. Crickmore, That the Statute relating to the Department of Mental and Moral Science, and to the Sub-Department of History be read a first time.—*Carried.*

The Senate adjourned to Monday, March 14th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTE of a meeting of the Senate, held at the Senate Chamber, March 14th, 1881.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. McMurchy, Mr. Langton, Mr. Taylor, Dr. Oldright, Judge Boyd.

On motion of Dr. Wilson, seconded by Mr. Crickmore, The Statute relating to the admission of women to university examinations, etc., was read a second time and passed.

Moved by the Vice-Chancellor, seconded by Dr. Wilson, That the Statute relating to the affiliation of St. Michael's College be read a second time and passed.—*Carried.*

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, May 26th, 1881.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Mr. McQuesten, Mr. Falconbridge, Rev. Principal Caven, Mr. Langton, Prof. Buckland, Prof. Chapman, Dr. Oldright, Dr. Graham, Mr. King, Rev. D. J. Macdonnell, Judge Cameron.

Communications were read,—

(1) From Rev. Father Vincent, Superior of St. Michael's College, informing the Senate that he had been appointed by the Faculty of St. Michael's College to represent that institution on the Senate of the University.

(2) From the Scrutineers who acted at the recent election of Members of the Senate, as follows :—

To the Senate of the University of Toronto :

GENTLEMEN,—The undersigned Scrutineers, appointed to act at the counting of votes cast during the election of Members of the Senate for 1881, have the honour to report as follows :—

To represent Convocation on the Senate, Isaac Baldwin McQuesten, M.A. ; William Glenholme Falconbrigdge, M.A., and Thomas Wardlaw Taylor, M.A., Q.C., were elected, the vote standing :—

Mr. McQuesten	344	Mr. Taylor	309
Mr. Falconbridge	323	Dr. McFarlane	239

To represent the High School Masters of Ontario on the Senate, Archibald McMurchy, M.A., was elected, the vote standing :—

A. McMurchy	17	D. McHenry	1
W. Tassie	2	W. Oliver	1
G. Dickson	1	J. Seath	1

(Signed) W. MULOCK,
Vice-Chancellor.
C. S. PATTERSON,
W. T. BOYD.
Scrutineers.

Mr. Langton presented the following report of the Committee on the Observatory property :—

The Committee appointed to confer with the Dominion Government, as to the property in connection with the Observatory, have, after considerable delay, received from the Dominion Government a proposition to which they recommend the Senate to assist with one slight modification. It is very desirable that a foot-path should be opened to St. George Street, for the convenience of students coming in that direction, and there have been negotiations for the purchase, for that purpose, of a strip of the lot lying between the University property and St. George Street. But the boundary of that lot is about 34 feet to the southward of the limit of the Observatory lot. It would therefore be necessary, if the foot-path were taken straight through, to purchase an unnecessary

quantity of that lot with the additional disadvantage that such a wide strip might lead to pressure for a regular road being taken through. It has, therefore, been proposed to the Dominion Government that they should permit a foot-path to be taken through the rear of the Observatory lot, so as to unite the path to be taken through our own ground with the strip which it is proposed to purchase of that lot between it and St. George Street. This proposition has been made by the Committee to the Dominion Government, but no definite reply has as yet been received.

All which is respectfully submitted.

JOHN LANGTON,
Chairman.

The Report was accompanied by the following letter:—

MARINE AND FISHERIES DEPARTMENT,
OTTAWA, 20th April, 1881.

SIR,—Referring to your letter of 9th of December last, in reference to the Observatory property at Toronto, and requesting to be informed as to the position of this Department, so that the agreement come to may be reduced to writing in the proper legal way, I beg to inform you that this Department is prepared to abandon all claim to the property lying outside of that deeded to Her Majesty by the University authorities, and which is included within the red lines, and colored pink in the sketch attached to your letter and returned herewith. The Director's house and Observers' cottages, which lie outside of this deeded land, are consequently given up to the University, and the Department will make provisions for the Director and Observers by allowing them a suitable sum as an equivalent for rent. It will be understood that the University waives all claim for back rent.

The buildings on the property deeded to the Government will be retained by the Government. With reference to the road through the property, I am to inform you that the Department agrees that it shall remain open as at present, on condition that the University authorities deed to the Government a piece to the south of the property colored pink, and which will be sufficient to enclose the sheds and buildings which now lie a little outside of the boundary line.

I am, Sir,
Your most obedient Servant,

W. M. SMITH,
Deputy Minister of Marine, etc.

Z. A. LASH, ESQ., Q.C.,
Deputy Minister of Justice.

Moved by Mr. Langton, seconded by Dr. Wilson, and carried, That in the matter of the University property now occupied by the Dominion Government for Observatory purposes, the Committee appointed to deal with the question be authorized to carry out the settlement on the terms set forth in the letter of Mr. W. M. Smith to Mr. Lash, subject to the variations set forth in the annexed memorandum, and to the further proviso that the property to continue occupied by the Dominion Government shall revert to the University when the same shall cease to be used by them for Observatory purposes.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, June 4th, 1881.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Dr. Larratt Smith, Prof. Buckland, Mr. Taylor, Dr. Oldright, Judge Boyd, Mr. Gibson, Mr. King, Mr. Campbell, Mr. Falconbridge, Rev. Principal Caven, Judge Patterson, Mr. McMaster.

Moved by Dr. Oldright, and seconded by Mr. McMurchy, That for the consolidation of the Statutes the same committee as last year be re-appointed, with the addition of the name of Mr. Falconbridge.—*Carried.*

Moved by the Vice-Chancellor, seconded by Judge Boyd, and carried, That Pass Matriculation Examinations be held in the Island of Jamaica, the Examinations to be under the direction of the Colonial Secretary, Kingston, Jamaica.

The Senate adjourned to Wednesday, June 8th, at 1 o'clock p.m.

Confirmed 2nd August, 1881.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, on Wednesday, June 8th, 1881.

After meeting in the Senate Chamber, the Senate proceeded to the Convocation Hall, when degrees were conferred and other proceedings had, as appears of record in the Book of Convocation.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chambers, August 2nd, 1881.

Present :—The Vice-Chancellor, Mr. Crickmore, Prof. Wells, Rev. Father Vincent, Mr. McMurchy, Judge Boyd, Prof. Loudon, Dr. Graham, Mr. McQuesten, Mr. Falconbridge, Mr. McMaster.

Letters were read from—

(1) The Secretary of the Theological College Committee of the Church of England in Jamaica, on behalf of the College, thanking the Senate for granting that Matriculation Examinations be held in the Island of Jamaica.

(2) The Bishop of Huron, Chancellor of the Western University, asking for the affiliation of that Institution with the University of Toronto.

(3) The Bursar, forwarding copy of an Order in Council, approved July 15th, 1881, recommending the appointment by the Senate from its members, of two additional members of the Board of Management.

(4) The Bursar, forwarding draft agreement between the University and the City relative to the proposed alterations to Queen Street Avenue.

(5) From Mrs. Mulock, enclosing her check for $2,000, with which to enable the Senate to found a Scholarship for the Faculty of Arts.

Mr. Falconbridge gave notice of his intention to introduce a statute to amend and consolidate the Statutes and Regulations respecting the Degree of LL.D.

The Vice-Chancellor gave notice that at the next meeting of the Senate he would introduce a statute amending the various Statutes of the University concerning Upper Canada College.

The Vice-Chancellor gave notice that at the next meeting of the Senate he would move for the appointment of two additional members to the Board of Management, as recommended by His Honour, the Lieutenant-Governor in Council.

Moved by Rev. Father Vincent, seconded by Prof. Wells, and carried, That the application of the Western University for affiliation with this Institution, be referred to a Committee composed of the Vice-Chancellor, Hon. Justices Patterson, Morrison and Cameron, Judge Boyd, Prof. Loudon, Mr. Gzowski and Mr. Falconbridge.

Moved by Prof. Loudon, seconded by Dr. Graham, and carried, That the Senate of the University of Toronto, beg to tender to the American Association for the advancement of Science, a cordial invitation to hold their next meeting in Toronto, and to assure them that the authorities of the University will deem it an honour to assist in making the meeting in every way successful.

Moved by Judge Boyd, seconded by Mr. Crickmore, and carried, That the Senate of the University of Toronto beg leave to tender their grateful acknowledgement to Mrs. Mulock, mother of its respected Vice-Chancellor, for her generous gift of $2,000, and to assure her that it will be employed, in accordance with her liberal intentions, in promoting the study of classical learning in our Provincial University.

It was decided that a copy of the preceding resolution (engrossed) be sent to Mrs. Mulock.

Prof. Loudon gave notice of his intention of introducing at the next meeting a statute amending the Curriculum in Arts, by giving to the examiners the power of recommending under special circumstances, candidates in Honours for the degree of B.A.

Prof. Loudon gave notice of motion for the appointment of a Committee, to consider the best means of appropriating the money placed at the disposal of the Senate by Mrs. Mulock.

The Senate adjourned.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held at the Senate Chambers, September 15th, 1881.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Cockburn, Rev. Father Vincent, Dr. Oldright, Judge Boyd, Prof. Loudon, Mr. King, Mr. Falconbridge, Mr. Taylor, Rev. Principal Caven.

The Vice-Chancellor presented the following report of the Committee on the affiliation of the Western University:

To the Senate, etc.:—

GENTLEMEN,—The Committee appointed by your Honourable Body to confer with the representatives of the Western University on its application for affiliation with this University, beg to report as follows:

That a conference was held between your Committee and the Chancellor of the Western University, when the following basis of affiliation was agreed upon, subject to ratification by the Senates of the respective Universities, namely:

1st. That the proposed affiliation should take effect forthwith, and continue until dissolved by mutual consent, and until so dissolved, the Western University should not be entitled to confer Degrees in the Faculty of Arts; and that a copy of this agreement be transmitted to the Lieutenant-Governor in Council.

2nd. That all examinations of students of the Western University in the Faculty of Arts, other than those in the Honour Department of Natural Sciences and Physics, should be conducted by the University of Toronto, in the City of London, at the same times and under the same conditions as the same are conducted in the City of Toronto.

3rd. That Degrees should be conferred in the City of London by the Chancellor, Vice-Chancellor, or such other person as shall be specially appointed for that purpose by the Senate of the University of Toronto, upon such students of the Western University as shall be entitled thereto.

Your Committee recommend that such affiliation take place on the above mentioned basis.

All which is respectfully submitted.

W. MULOCK,
Vice-Chancellor.

Toronto, September 12th, 1881.

The consideration of the report was deferred.

The Vice-Chancellor presented the following report from the Committee on Upper Canada College:

To the Senate, etc.:—

GENTLEMEN,—The Committee upon Upper Canada College, to whom was referred the Memorandum of the 31st day of May, 1881, of the Minister of Education to His Honour, the Lieutenant-Governor in Council, and submitted to your Honourable Body, beg to report to the Senate as follows:

That your Committee have proceeded with the enquiries suggested in the communication in question, and during the progress thereof have been requested by the Minister of Education to consider what would be a reasonable sum to be paid to the Principal of the Upper Canada College, upon his contemplated retirement from his office as Principal.

Your Committee is informed by the Minister of Education, that the Government i prepared to allow to the Principal, as a gratuity on his retirement, the sum of four thousand six hundred and sixty-six dollars ($4,666).

Your Committee find that during his occupancy of the Principal's residence on the College grounds, Mr. Cockburn has expended considerable sums of his own means in necessary repairs and improvements of a lasting nature upon such residence, and that thereby the same is enhanced in value to the extent of fourteen hundred and fifty dollars ($1,450), and that it would have cost the College that amount to so improve the residence, and your Committee beg to recommend that he be paid on this account fourteen hundred and fifty dollars in addition to the said sum of $4,666.

The Committee beg further to report that, in the case of the Principal's retirement from his office, he has suggested that such retirement shall take effect at the end of this month, and that he should then be paid up to that date a proper proportion of the year's salary including his proportion of College fees.

Your Committee find that the total amount paid to the Principal as salary and proportions of fees, amounted for the year which closed on the 30th of June last to the sum of $3,629.61, and would recommend that he be paid at this rate from the said 30th of June until the 30th day of September instant, first deducting all payments made on account thereof.

In conclusion, your Committee whould say that they expect at an early date to report upon the matters referred to them as above mentioned.

All which is respectfully submitted.

Dated this fourteenth day of September, one thousand, eight hundred and eighty-one.

W. MULOCK,
Vice-Chancellor.

The Report was adopted on motion of the Vice-Chancellor, seconded by Judge Boyd, the division being as follows:

Yeas—Prof. Loudon, Mr. Taylor, Judge Boyd, Principal Caven, Mr. Falconbridge, Rev. Father Vincent, Mr. King.

Nays—Dr. Wilson.

The Registrar was directed to send a copy of the Report to the Minister of Education.

Moved by the Vice-Chancellor, seconded by Prof. Loudon, and carried, That Mr. Taylor and Judge Patterson, be appointed to fill the places on the Board of Management created by the Order in Council of July 15th, 1881.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held at the Senate Chambers, September 30th, 1881.

Present :—The Vice-Chancellor, Dr. Wilson, Prof. Wells, Rev. Father Vincent, Mr. Langton, Prof. Buckland, Judge Boyd, Prof. Loudon, Mr. Falconbridge, Mr. Taylor, Rev. Principal Caven, Dr. Oldright.

A letter was read from the President of University College informing the Senate that the vacancies on the Senate, caused by the resignation of Mr. Pearman and retirement of Prof. Buckland, representatives of the Council of University College on the Senate, were filled, in accordance with the statute, by Professors Chapman and Young.

The following resolution was moved by Dr. Wilson, seconded by Prof. Loudon, and carried :

Resolved, That, at this the first meeting since the death of Mr. A. F. Campbell, M.A., a member of the Senate, and a distinguished graduate of this University, the Senate record their sense of the loss sustained in his early death, and desire to convey to his widow and family the expression of their sincere sympathy in the bereavement sustained by them.

The Registrar was directed to have the preceding resolution engrossed and sent to Mrs. Campbell.

The following resolution was moved by Dr. Wilson, seconded by Principal Caven, and carried.

Resolved, That the Senate is prepared to give a hearty response to the desire of the Chancellor and authorities of the Western University, as expressed in the letter of their Chancellor of July the 9th, as there stated " with the view of placing its several Faculties of Arts, Law and Medicine, in affiliation with the Provincial University, and thus securing the highest possible educational standard "; that it be therefore referred back to the committee to renew communications with the authorities of the Western University, inviting them to give the proposition of affiliation, on the basis originally submitted by them, their renewed consideration, and to set forth for the information of this Senate the grounds of their final decision, in view of the object sincerely entertained by both institutions of securing the highest possible educational standard in all the above-named Faculties.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held at the Senate Chamber, Nov. 17th, 1881.

Present :—The Vice-Chancellor, Mr. Gibson, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Prof. Wells, Rev. Father Vincent, Mr. Langton, Dr. Larratt Smith, Prof. Young, Dr. Oldright, Dr. Richardson, Mr. Bethune, Prof. Loudon, Mr, King, Mr. McQuesten, Mr. Falconbridge, Mr. Taylor, Rev. Principal Caven, Rev. D. J. Macdonell.

Letters were read from,—

(1) Lieut.-Col. Stuart, for Governor-General's Secretary, accompanying the Gold Medal given by His Excellency to the University.

(2) G. R. R. Cockburn, Esq., directing the attention of the Senate to the fact that in granting him an allowance on his retirement from the Principalship of Upper Canada College, the only matters submitted by the Government to the Senate for discussion were (*a*) the determination of the sum to be paid him on account of permanent improvements made by him in his residence ; and (*b*) the amount to be paid him for the quarter ending 30th September, 1881.

The Vice-Chancellor presented the following Report of the Committee on the affiliation of the Western University.

To the Senate, etc.:

GENTLEMEN,—Your Committee appointed to consider the question of the affiliation of the Western University with the University of Toronto, beg leave to make the following supplemental report:—

1. On again conferring with the Chancellor of the Western University in regard to this matter, your Committee were informed that a mistake had been made by him in applying for the affiliation of the Law and Medical Faculties of the Western University, as the resolution of the Senate of the Western University on which his application was based asked him to apply for affiliation in the Faculty of Arts only. It appears, further, from conversation had with the Chancellor, and from the action of the Senate of the Western University, that there is no immediate prospect of any fuller affiliation being applied for. The answer to the resolution of this Senate, setting forth the desirability of making the affiliation as complete as possible, is contained in the following extract from the minutes of the Western University, October 5th, 1881:—

Moved by the Vice-Chancellor, Very Rev. Dean Boomer, seconded by Rev. Canon Hincks, That whereas, on June 24th, 1881, the Chancellor was requested to make arrangements for affiliation in the Arts Course with the Toronto University;

And whereas, a communication dated September 30th, 1881, has been received from the Senate of the Toronto University, intimating that they wish the affiliation to be made in all branches, and not in Arts only;

And whereas, from various causes it may not be practicable to comply with the wishes of the Toronto University as fully as they desire;

Resolved, That while the Senate of the Western University is still very desirous of affiliating in Arts with the Toronto University, yet, in the event of the Chancellor not obtaining such satisfactory conditions as he may think proper for affiliation with them, he may be authorized to apply to the Lieutenant-Governor in Council on behalf of the Senate of the Western University for leave to confer degrees in accordance with the Act of incorporation.—*Carried.*

Whilst regretting that the Senate of the Western University do not see fit to give up their University powers in all the Faculities except Divinity, your Committee, nevertheless, are of opinion that it would not be in the interests of a high standard of University Education to refuse the partial affiliation asked for. They, therefore, recommend that the application in question be granted on the conditions set forth in the previous report of your Committee, and also hereinafter mentioned, it being understood that any special privileges now accorded shall be equally enjoyed by all other affiliated Colleges outside Toronto. As, however, the effect of an Act of affiliation is to deprive the affiliated institutions of University powers, and some distinctive and appropriate name other than that of the Western University must be assumed by the Faculty of Arts of that Institution until such name is legally acquired, it is recommended that they be styled for the purposes of this affiliation "The Faculty of Arts of the Western University."

In suggesting the following additional conditions of the affiliation, your Committee desire to direct attention to the fact that extra rural examinations have been carried on sucessfully for several years, and in their opinion no serious difficulties need be anticipated in this additional extension of our affiliated system.

It is recommended that all pass examinations, including those for Junior Matriculation, be held simultaneously in Toronto and in the affiliated Colleges ouside, it being understood that the said Colleges shall furnish every accommodation which the University may deem necessary for the conduct of the examinations. A like recommendation is made with regard to all Honour Examinations, except those in Natural Science and Experimental Physics. Your Committee fully recognize the difficulties attending the holding of simultaneous Competitive Examinations, but, under existing circumstances, they believe that such examinations can be satisfactorily carried on to the extent contemplated at present under our affiliated system. The strongest objection to such Examina-

tions is founded on the difficulty of finding Examiners who can do justice to candidates educated under different Professors, and in various schools. Such an objection, however, cannot well be taken for some years to come; and until the difficulty arises, it would be premature, in the opinion of your Committee, to suggest a remedy.

With regard to the conferring of degrees, your Committee see no necessity for holding the ceremony exclusively in Toronto. They, therefore, recommend that degrees be conferred at the affiliated Colleges outside of Toronto, in such a manner as the Senate may from time to time determine. The correspondence of the undersigned with the Chancellor of the Western University, together with certified copy of the proceedings of the Senate of that University, is hereto annexed.

All which is respectfully submitted,

W. MULOCK,

Nov. 17th, 1881. Vice-Chancellor.

The Vice-Chancellor gave notice that at the next meeting of the Senate, he would move the adoption of the Report and Supplemental Report of the Committee on the affiliation of the Arts Faculty of the Western University with the University of Toronto.

On motion of Prof. Loudon, seconded by Dr. Richardson, the following statute was read a first time :—

By the Senate, etc. :

Be it enacted, That a Candidate who competes for Honors at the Final Examination for B.A., and fails to obtain the requisite number of marks to entitle him to be classed in Honours, may be awarded a Pass Degree, providing that the Examiners certify in their report that the proficiency he has manifested fairly entitles him to that standing.

Dr. Wilson gave notice that at the next meeting of the Senate he would introduce a statute amending the statute on the requirements for Honours in the Faculty of Arts.

Mr. Gibson gave notice that at the next regular meeting of the Senate he would move that the Statutes relating to Sessions of the Senate be amended, so as to provide for a continuous Session from the first Tuesday after the Annual Elections throughout the following year.

The Senate adjourned to Friday, Nov. 25th, 1881.

Confirmed.

W. MULOCK,

Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, Nov. 25th, 1881.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Ogden, Prof. Wells, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Dr. Larratt Smith, Prof. Young, Dr. Oldright, Mr. Gibson, Dr. Richardson, Prof. Loudon, Dr. Thorburn, Dr. Graham, Mr. King, Mr. McQuesten, Mr. Falconbridge, Rev. Principal Caven.

Moved by Mr. Falconbridge, seconded by Mr. McQuesten, and carried unanimously, that Dr. Lachlan McFarlane be elected to fill the place in the Senate vacated by the lamented death of Mr. A. F. Campbell.

On motion of Mr. Gibson, seconded by Mr. King, the following Statute was read a first time :—

By the Senate, etc. :

Be it enacted, That the Statute relating to Sessions of the Senate be amended, so as to provide for one continuous Session thereof throughout the year, commencing on the Annual Meeting at which Committees are appointed.

The Vice-Chancellor presented the following letter relating to Upper Canada College, written by him to the Minister of Education, and which was directed by the Senate to be copied into the minutes:—

Re Upper Canada College.

21st September, 1881.

Dear Mr. Crooks,—Your letter of the 20th inst. received with copy of your draft of the proposed Order in Council. The latter will require some modification in order to be according to the facts.

1st. The Committee did not in their report express any opinion as to whether the sum proposed by the Government was reasonable or otherwise; but inasmuch as the Government refused to give Mr. Cockburn more than the sum named in the report, the Committee felt that it would be idle for them to advise the granting of any larger sum, and in consequence simply confined themselves to reporting to the Senate the amount which the Government offered. You will also observe from the Report that it does not state how this amount was arrived at: and I may say that when the adoption of the Report was before the Senate it was understood that the Senate was not assenting to any principle that should govern in such cases, but simply that as the Government offered a certain sum, the Senate thought that in addition to that sum the other sums named in the Report should be paid to Mr. Cockburn. There was a strong impression amongst some members of the Senate that the proposed allowance was too small, and it was only upon Mr. Cockburn expressing to the Senate his satisfaction with the whole arrangement that opposition was withdrawn. The Senate appeared, as far as one could judge, to think that the Government had made a very good arrangement from the standpoint.

(The remainder of this letter deals with other matters not touching on the above question).

Yours truly,

W. MULOCK.

Moved by Mr. Gibson, seconded by Prof. Young, and carried, That the Registrar be instructed to acknowledge the receipt of Mr. Cockburn's letter as to his retiring allowance, and to reply to same, informing him that the letter of the Vice-Chancellor to the Minister of Education, dated September 21st, clearly sets forth the position taken by the Senate regarding the matter in question, and that the Senate have ordered the substance of that communication to be placed on the Minutes of the Senate.

Moved by Mr. King, seconded by Dr. Graham, and carried, That the Committee for the consolidation of the University Statutes be re-appointed, with the same powers as to securing assistance in their work as were conferred on the Committee as originally appointed.

Moved by Mr. Gibson, seconded by Dr. Richardson, and carried, That the Committee appointed at the meeting of the Senate on the 13th day of December, 1880, to report upon the income and expenditure of the University of Toronto and University College, and to consider the best means under the circumstances of improving the efficiency and extending the usefulness of these Institutions, be re-appointed and instructed to submit their report.

On motion of Prof. Loudon, seconded by Mr. Langton, The Statute providing that Honour Candidates may, in certain circumstances, take a pass degree, was read a second time and passed.

On motion of Dr. Wilson, seconded by Prof. Young, the following Statute was read a first time:—

By the Senate, etc:

Be it enacted, That the paragraph in the Statute relating to a Candidate for Honours in any of the five Departments in the Faculty of Arts, be and is hereby amended by omitting the words "but he" after the words "shall not be considered to have passed the Examination of the year," and adding the following words: "Excepting that in the

Department of Modern Languages and Natural Sciences, a Candidate who in any one branch has failed to obtain the full percentage requisite for ranking in Honours may be allowed to proceed as Honour Man in the Department in the following year, a Candidate who has failed."

This Statute shall be applicable to all Candidates at the Examinations of 1881.

The Vice-Chancellor laid before the Senate his correspondence with the Chancellor of the Western University, relative to the affiliation of that Institution with the University of Toronto.

Moved by Dr. Wilson, seconded by Prof. Young, and carried, That the Vice-Chancellor obtain legal opinion as to the interpretation of that portion of the Statute incorporating the Western University which relates to its affiliation with the University of Toronto.

The Vice-Chancellor's notice of motion respecting the adoption of the Reports on the affiliation of the Western University was allowed to stand.

MINUTES of a meeting of the Senate held at the Senate Chamber, December 5th, 1881.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Dr. Larratt Smith, Dr. Oldright, Judge Boyd, Mr. Gibson, Dr. Richardson, Prof. Loudon, Mr. King, Mr. Falconbridge, Mr. Taylor, Rev. Principal Caven, Rev. Dr. J. Macdonnell.

On the motion of Mr. Falconbridge, seconded by Mr. Taylor, The following Statute was read a first time :—

By the Senate, etc :

Be it enacted, That the following shall be the requisites for obtaining the degree of LL.D. :

The following are the requisites for obtaining the degree of LL.D. :

Having been admitted to the degrees of LL.B., and M.A. ;

Being of ten years' standing from admission to the degree of LL.B. or of M.A., whichever shall have been last conferred ;

Having composed two approved Thesis upon subjects in law ;

Being of the full age of forty years.

The candidate is allowed to state the two departments from which he elects that the subjects of his Thesis are to be chosen, to be according to the following scheme :—

Department I. —Civil Law.
" II.—Constitutional Law.
" III.— Real Property.
" IV.—International Law.
" V.—Other branches of Law mentioned in the Curriculum.

The Theses are to be written in the Examination Hall in the presence of one of the examiners, and the subjects of the Theses are then announced.

The Chancellor, the Vice-Chancellor, the President of University College, and all members of the Senate who are Judges of the Superior and County Courts, or who are of Her Majesty's Council, either by Dominion or Provincial patent, shall form a special Standing Committee to examine the Theses, and to report to the Senate as to the fitness of the candidates to receive the degree.

On motion of Mr. Gibson, seconded by Dr. Oldright, the following Statute was read a second time and passed :—

By the Senate, etc. :

Be it enacted, 1. That there shall be one continuous session of the Senate in each year, commencing on the first Tuesday after the annual election of members of the Senate.

2. That all statutes relating to Sessions of the Senate, in so far as they are inconsistent with this Statute, are hereby repealed.

The Vice-Chancellor laid before the Senate additional correspondence between himself and Chancellor of the Western University, relative to the affiliation of that institution; also the legal opinion of Mr. Christopher Robinson, Q.C., as to the interpretation of that portion of the Statute incorporating the Western University which relates to its affiliation with the University of Toronto.

Moved by the Vice-Chancellor, seconded by Judge Boyd, and carried, That the Senate deem it expedient to permit the Western University to affiliate with this University in respect of its Faculty of Arts.

Dr. Richardson gave notice of the following motion :—

That the Chairman of Convocation be informed that an application has been received from the Western University, asking for the affiliation of the Faculty of Arts of the Western University with this University, and that a meeting of Convocation be called in order to give it an opportunity of discussing the proposed affiliation.

The Senate adjourned to Monday, December 19th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, Dec. 19th, 1881.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Mr. McMurchy, Mr. Langton, Dr. Larratt Smith, Dr. Oldright, Prof. Loudon, Mr. King, Mr. McQuesten, Mr. Taylor, Rev. Principal Caven, Rev. D. J. Macdonnell, Mr. McMaster, Mr. Justice Patterson.

Letters were read from,—

(1) G. R. R. Cockburn, Esq., asking that there be forwarded to him a copy of that portion of the minutes which contained the letter of the Vice-Chancellor to the Minister of Education, of date 21st September, 1881.

(2) B. F. Austin, M.A., B.D., Principal of Alma Ladies' College, St. Thomas, Ont., asking for the affiliation of that institution with the University of Toronto.

It was decided that the Registrar be instructed to inform Mr. Cockburn that the Senate does not feel itself at liberty to communicate portions of its minutes to such as are not members of its body, but that the Vice-Chancellor would at any time shew him his letter to the Minister of Education;

Also, that Mr. Austin be requested to furnish the Senate with a statement of the Faculty of Alma College and with its curriculum of studies.

On motion of Dr. Wilson, seconded by Dr. Larratt Smith, the following Statute was read a second time and passed :—

By the Senate, etc.:

Be it enacted, That the paragraph relating to a candidate for Honours in any of the five Departments in the Faculty of Arts, be and is hereby amended by omitting the words "but he" after the words "shall not be considered to have passed the examination of the year," and adding the words "excepting that in the Departments of Modern Languages and Natural Science, a candidate who in any one branch has failed to obtain the full percentage requisite for ranking in Honours may, at the special recommendation of the examiners, be allowed to proceed as an Honour man in the Department in the following year, a candidate who has failed."

This Statute shall be applicable to all candidates at the examinations of 1881.

On motion of Prof. Loudon, seconded by Mr. Langton, the following Statute was read a first time :—

By the Senate, etc.:

Be it enacted, 1. That there shall be three committees appointed to be called (1) The Board of Legal Studies; (2) The Board of Medical Studies; (3) The Board of Arts Studies: to whom shall be referred all proposed changes in the courses of study in their respective Faculties of Law, Medicine and Arts.

2. That the numbers constituting such Boards shall, in addition to the Vice-Chancellor, be as follows:—(1) and (2), three (3) members; (3), six (6) members.

On motion of Mr. King, seconded by Mr. McMurchy, the following resolution was adopted: (1) That the Faculty of Arts of the Western University, as soon as it has adopted a distinctive collegiate title, not descriptive of a university, shall be admitted to all the privileges enjoyed by any other affiliated institution in such Faculty. (2) That during the continuance of such affiliation, the Western University shall not confer any degrees in the Faculty of Arts.

Moved by Mr. King, seconded by Mr. McQuesten, and carried, That the Registrar be instructed to procure an assistant in the duties of his office; such assistant to be approved of by the Vice-Chancellor, to be paid such salary as the Board of Management thinks proper, and to enter upon his work (for the proper discharge of which the Registrar shall be held responsible) at the beginning of the incoming year.

Mr. King gave notice of his intention of introducing at the next meeting of the Senate, a Statute to amend the Statute (Chap. CX.) respecting the examinations at affiliated institutions, by enabling the University to hold examinations at affiliated institutions for all the four years instead of two as at present.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held at the Senate Chamber, January 13th, 1882.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Principal Buchan, Dr. Fulton, Dr. Oldright, Mr. Gibson, Prof. Loudon, Mr. Falconbridge, Mr. Taylor, Rev. Father Vincent, Mr. Langton, Rev. Principal Cavan, Dr. Larratt Smith.

The Vice-Chancellor presented the following report of the Committee on Finance:

To the Senate, etc.:—

GENTLEMEN,—The Committee appointed to report upon the Income and Expenditure of the University of Toronto and University College, and to consider the best means under the circumstances of improving the efficiency and extending the usefulness of those institutions, beg leave to submit the following report:

After due consideration of the whole question, it appears that the available resources of the University and University College are altogether inadequate to render these Institutions as complete as they should be in regard to the strength of the staff, and all the aids and appliances necessary to the highest kind of teaching. Whilst our poverty of means is to be regretted, it is on the other hand a matter for congratulation that there exists such abundant evidences of progress and of the pressing necessity for greater activity to meet the intellectual wants of the country. Prominent amongst the causes which render urgent an addition to our forces, may be mentioned the increase in the number of students and the considerable extensions that have recently been made in revising the curriculum of various courses of study. Many new classes have thus been rendered necessary, and the labour of the instructors largely increased, more especially in connection with the practical courses in Science and Honour work generally. There are, moreover, other and equally cogent reasons which point to the necessity for making additions to our teaching strength. In certain branches, such as Constitutional Law and Political Economy, students have not hiterto had the benefit of any teaching; and it is essential that instruction in these branches should not be neglected whilst they are considered worthy of forming a part of a liberal education. Nor should we lose sight of the duty incumbent upon the University of promoting the advancement of learning by offering every encouragement and facility to those graduates who desire to devote themselves to special lines of research.

Having regard to such considerations as these, your Committee is of the opinion that the teaching staff should be much larger than it is at present, and should consist of separate professors or lecturers on

Greek,	Mathematics,
Latin,	Natural Philosophy,
French and Italian,	Mental Science,
German,	Chemistry,
English,	Physiology,
Hebrew,	Geology and Mineralogy,
History,	Zoology,
Botany,	Political Economy,
Constitutional Law and Jurisprudence,	

together with a Demonstrator on Physics, a Mathematical Tutor, a Classical Tutor, and such other assistants as the numbers of certain classes might render necessary.

Besides these there should be established certain Fellowships whose holders should have teaching functions according to the scheme proposed at a subsequent part of this report. Nor can the institution be considered complete without the establishment of an observatory, in which event there would be added a Professor of Astronomy. Such a scheme of reorganization would also necessitate a large expenditure on Library, Museums, and Laboratories.

For the purposes of the University there has for some time been the most pressing necessity for an Examination Hall. The numbers of candidates examined at the same time being now so large that they fill to overflowing Convocation Hall and all the available lecture-rooms.

To all this is to be added the consideration of the question of providing facilities for the higher education of women.

The expenditure involved in such a reorganization as is indicated above would extend far beyond the available resources of the Institution, and it is submitted at present only with the view to the consideration by the Government, of the question whether they would propose such an increase of funds as will enable a complete reorganization to be effected.

If the scheme for reorganization is to be confined to the present available resources, it becomes necessary to ascertain what these are.

The income from the endowment for the year ending June 30th, 1881, amounted to $65,696, the main items of which are in the appended statement marked "A."

Some increase to the revenue may be expected during the next ten years, as park lots at present vacant are gradually brought under lease, and the sales of the comparatively small quantity of remaining lands throughout the Province will also afford some slight increase.

On the other hand, if allowance be made for the gradual reduction in the rate of interest and for losses arising from loans and uninvested funds, it is possible that the income derivable from the endowment may be materially reduced.

The only other source of revenue consists of fees, which, for the year ending June 30th, 1881, were :

University	$3,269 50
University College	3,327 00
	$6,596 50

which, being added to the receipts from the endowment ($65,696) make a total revenue for the last year of $72,292.50.

Dealing with the revenue for the next few financial years the average income cannot be estimated higher than as follows :

From Endowment and subject to charges presently to be mentioned	$65,696 00
Fees on present scale	6,596 50
Total	$72,292 50

By an arrangement made some time ago to acquire certain University property for public purposes, a sum of $20,000 of public money is expected to be placed at the disposal of the University on the conditions that $10,000 of its own funds in addition (making in all $30,000) are expended in the erection of a building for examination pusposes and other objects absolutely necessary to the efficient working of the Institution. This will involve a reduction in the income of $600, being the interest on $10,000. Deducting this sum from the above $72,292.50, there would remain $71,692.50 as the average annual income of the next few years, without allowing any provision for losses on investment or by reason of funds being uninvested.

The expenditure of the current year, including the payment of pensions, will, it is estimated, reach $67,914, and it is not likely to be reduced during the next few years. This amount, it should be remarked, does not include any sum for extraordinary and unforeseen expenses. With regard to the amount ($4,866.66) paid for pensions, it is to be hoped that several years may elapse before further charges are credited under this head.

It seems clear that some general equitable plan ought to be adopted whereby contributions should be made by the professors and other members of the staff towards a superannuation fund, and the amount of allowance and conditions of retirement declared. In this connection it would be well to consider how far the Canadian civil service superannuation system, with such modification as the difference of age on entrance involves, might serve as a basis. It is possible that the plan of reserving a portion of the salary and creating thereout a fund for each professor, bearing interest meantime, and payable, principal and interest, on retirement, might be more suitable.

In view of the recent increase in the salaries, the present time seems especially suitable for the settlement of the question. Meantime the charge for retiring allowances must be placed at $4,866.66.

There will be an increased charge for heating and incidental expenses connected with the new Examination Hall of about $400, and it is proper to allow for such incidental expenditures as occur in most years an average sum of at least $1,000.

This brings the estimated expenditure up to $69,314, as against an estimated revenue of $71,692,50.

These figures make it clear that the available margin is very narrow, and that even for the most indispensable improvements it may be necessary to propose a resort to the only remaining resources—an increase in the scale of fees.

The plan of improvement to be suggested is therefore limited as far as possible, and is confined to those points which seem most urgent and of most obvious importance, and to those methods of action which involve least addition to the expenditure.

The existing staff is as follows:

Professors: Classics, Mathematics and Natural Philosophy, History and English Literature, Logic, Metaphysics and Ethics, Chemistry, Mineralogy and Geology, Natural History, Agriculture.

Lectures: In French, German, Italian, Oriental Languages.

Tutors: In Classics, Mathematics.

It is proposed to establish, in addition, two Lectureships, one in Political Economy and one in Constitutional Law and Principles of Jurisprudence, the salary of each Lecturer being $800 a year; and to appoint a Demonstrator of Physics at a salary of $1,200 a year.

It is proposed further to inaugurate a system of Fellowships whereby graduates of approved merit and possessing special qualifications for teaching may, for a limited period, furnish most valuable assistance in the work of tuition, while they are at the same time engaged in pursuing some special line of study. These Fellowships should be held upon the condition of giving instruction under the control of the Professor in the branch in which the Fellowship is awarded, and should be granted by the Faculty with due regard to the merit of those available and their fitness for the discharge of functions for which the Fellowships are created. It is proposed that each Fellowship should be tenable for

three years, at a salary of $500 a year. It is necessary that the number of these Fellowships, and the departments in which they should be granted, should be settled with reference to the smallness of the available funds and to the urgent need for increased teaching power in certain departments, subject to such modifications and additions as changed circumstances and experience in the new system may suggest. For the present it is proposed that there shall be eight Fellowships, allotted to the various departments as follows :

Two in Classics.
One in Mathematics.
One in Physics.
Two in Modern Languages, with History.
Two in Natural Sciences.

The annual charges involved in these proposals would be for :

Fellowships	$4,000 00
Lecturers	1,600 00
Demonstrator of Physics	1,200 00
	$6,800 00

From this sum, however, is to be taken $700, already charged for the temporary appointment of a Demonstrator of Physics for the current year, so that the additional expenditure to be provided for under the above head is $6,100. The estimated available surplus already stated at $2,378.50 being taken from this there would remain a deficiency of $3,721.50.

To meet this deficiency, pending the possible improvement of the net income from the other sources referred to, it would seem that the only immediately available means for making the requisite addition to the teaching staff is an increase of the fees of the two institutions. As this can only be effected by the joint action of the two governing bodies, it is recommended that the Senate invite the co-operation of the Council of University College for the purpose of meeting the deficiency in question.

All which is respectfully submitted.

W. MULOCK,
Vice-Chancellor.

Toronto, 11th January, 1882.

The report was received on motion of the Vice-Chancellor, seconded by Prof. Loudon.

STATEMENT A.—Shewing capital and estimated income for the year 1881–82, (June 30th):

Source.	*Capital.*	*Income.*
Debentures	$792,656 00	$46,155 00
Mortgages	182,953 00	12,509 00
Sales of lands—balances unpaid	49,523 00	2,971 00
Park rents		5,630 00
Other rents		600 00
Bank stock		28 00
		$67,893 00
Income as above		$67,893 00
Bank account overdrawn $36,610.00—interest, 6 per cent.		2,198 00
		65,696 00
University fees		3,269 50
" College fees		3,327 00
		$72,292 50

STATEMENT B.—Estimates for year 1881–82.

Bursar's office	$2,600 00
Law costs	200 00
Several incidentals	200 00
Salaries and wages, including pensions ($4,866.66)	42,094 00
Scholarships	4,855 00
Examiners	2,750 00
Prizes and medals (University)	350 00
" " (College)	400 00
Printing and stationery (University)	2,200 00
" " (College)	500 00
Advertising (University)	100 00
" (College)	50 00
Fuel	1,500 00
Museum—Natural History	350 00
" Geological	100 00
" Ethnological	100 00
Library	2,650 00
Water and gas	400 00
Building and grounds	3,000 00
Incidentals (University)	1,500 00
" (College)	1,500 00
Physical laboratory	500 00
Chemical materials	100 00
Telephones	115 00
Rent (President's house)	800 00
Insurance	1,700 00
	$67,914 00

N.B.—The item of $1,700 for insurance is not an annual charge, as that secures insurance for three years.

On motion of Prof. Loudon, seconded by Mr. Gibson, The Statute relating to Boards of Studies was read a second time and passed.

Moved by Mr. Falconbridge, seconded by Mr. Taylor, and carried, That the Statute respecting the Degree of LL.D. be referred to a Committee consisting of the President of University College, Mr. Langton and the mover and seconder, the President to be the convener of the Committee.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, January 20th, 1882.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Buchan, Dr. Fulton, Prof. Wells, Rev. Father Vincent, Dr. Oldright, Judge Boyd, Mr. Gibson, Prof. Loudon, Mr. Falconbridge, Rev. Principal Caven, Mr. McMurchy.

The Vice-Chancellor presented the following Report of the Committee on Upper Canada College, which was received on motion of the Vice-Chancellor, seconded by Judge Boyd :—

To the Senate of the University of Toronto:

Gentlemen,—The Committee on Upper Canada College begs to report as follows upon the Memorandum dated the 31st of May, 1881, of the Minister of Education.

I. Boarding House.

The repairs and alterations recommended in the Memorandum have been made at a cost of $2,981.71, which sum has been paid out of the surplus to the credit of Boarding House account.

The changes referred to have added greatly to the comfort and convenience of the resident pupils. The Boarding House proper now accommodates seventy-eight, and the Supplementary Boarding House which consists of one flat of the two easternmost masters' residences, eighteen pupils. It is recommended that with a view to the possible increase in the number of boarders, it be understood that all the masters' residences, except the Principal's, may either wholly or in part, be at any time turned into supplementary boarding houses, and that the masters from time to time in possession have the right to occupy them until required for such purpose. By utilizing in this way one flat only in each of the remaining masters' residences, the number of boarders that could be accommodated would be increased from ninety-six to one hundred and thirty-two.

II. Educational Measures.

The Committee concurs in the view expressed by the Minister of Education in said Memorandum in thinking it desirable to give greater flexibility to the course of instruction. Two modes of accomplishing this have suggested themselves. The subjects of study might be arranged in two groups, and the pupils promoted in each group without necessary reference to their proficiency in the other, or two separate courses might be instituted, namely,—a Literary Course with Latin for its leading subject, and a Scientific Course in which promotion would depend mainly upon Mathematics. The Committee, however, is not prepared to expressly recommend either course without first giving the question further consideration.

For reasons similar to those which suggest the wisdom of increasing the flexibility of the course of study, the Committee is not at present inclined to regard with favour the proposals to raise the standard of the Entrance Examination, or to take the promotion of pupils out of the hands of the masters. Such changes would, in the opinion of the Committee, lead to an undesirable rigidity in the management of the College, and whilst probably increasing its efficiency for cramming pupils for university and other examinations, would lessen its value as a place for the formation of character. At the same time the Committee recognizes the advisability of there being an Entrance Examination under the direction of the Principal.

III. Staff.

The Committee recommends that the permanent staff consist of a first and second classical, a first and second mathematical, a first and second English, and a French and German, master. Either the first classical, the first mathematical, or the first English master being Principal, at a salary as at present fixed by the Order in Council, of $2,600 a year with residence. The remaining masters of the first grade to be paid each at the rate of $1,650 per annum; the masters of the second grade to be paid each at the rate of $1,200 per annum; the French and German master not to be considered as of either class, and to be paid at the rate of $1,350 per annum. If it should at any time be difficult to secure the service of one man capable of properly teaching both languages, it would then be necessary to engage separate masters at such reasonable salaries as might then be arranged.

It is further recommended that the principle of paying the masters in part from a share in the fees be abandoned, and that they receive hereafter the above-mentioned fixed sums in lieu of the fixed and variable sums heretofore paid them. It is also recommended that the present second classical master, in consideration of his valuable services as classical master, and also of the fact that he is now enjoying the same salary as that received by the first classical master, be regarded as entitled to a salary at the rate of that allotted to a master of the first grade.

It is further recommended that the present Superintendent of the Boarding House, and any successor, be relieved from class-room duty at 12.30 p.m. each day, and that in consequence of such reduction in his duties as master, his salary as master be $1,300, so long as he shall fill the office of Superintendent of the Boarding House.

Such partial relief from duty will enable the Superintendent to devote more attention to the management of the Boarding House, and at the same time afford to him that daily relaxation from duty which, in the opinion of the Committee, is necessary in the case of a master whose duties require his constant personal supervision over the boarders whilst in residence.

The present staff of assistant masters amounts to four. The charge for their services cannot be reduced below the present amount thereof, viz.: $3,158.

IV. Boarding House Management.

The Committee is of opinion that the Boarding House should continue to be managed as heretofore by a resident master, and the necessary number of assistants, under the supervision of the Principal, with power to the Committee to make all necessary arrangements with regard to the supplementary boarding houses, the emoluments of the masters thereof, and their relations to the Superintendent.

It is further recommended that the Superintendent of the Boarding House be always one of the Masters of the College, who shall reside in the Boarding House, and be paid for his services as such Superintendent in the same manner and on the same principle as at present in force, except that he shall not receive as such Superintendent in any one year a larger sum than one thousand dollars.

It is suggested that the changes involved in the foregoing recommendations shall take effect on the first of July next, except as to the amount of the Principal's salary, which shall be two thousand six hundred dollars from the date of his appointment.

All which is respectfully submitted,

WILLIAM MULOCK,

Toronto, 20th Jan. 1882. Vice-Chancellor.

On motion of Prof. Loudon, seconded by Mr. Gibson, the following statute was read a first time, and referred to the Board of Arts Studies :—

By the Senate, etc. :

Be it enacted, That the work prescribed in the Mathematical Department in the Faculty of Arts shall be altered as follows :

(1) The Pass work of the First Year shall consist of—

Euclid, Books IV. VI., and definitions of Book V.
Algebra, Equations. Proportion, Progression, Trigonometry.

(2) The Mathematical Department in the Fourth Year shall be divided into two Departments, the Mathematical and the Physical, the work prescribed for these being respectively :—

Mathematical Department—
Modern Geometry,
Higher Plane Curves,
Higher Algebra,
Differential Equations,
Theory of Probability,
Elliptic Functions,
Plane Astronomy,
Quaternions,
With Problem Papers of 1st and 2nd years.

Physical Department—
Attractions,
Elasticity,
General Dynamical Principles,
Acoustics,
Physical Optics,
Thermodynamics,
Electrostatics,
Method of Least Squares,
With Problem Paper of 3rd year.

On motion of Dr. Oldright, seconded by Mr. McMurchy, the following statute was read a first time, and referred to the Board of Arts Studies :—

By the Senate, etc.:

Be it enacted, Statute cxi., regarding examinations for Women is hereby amended :—

1. By adding to the sixth clause thereof, the words "nor to the Third Examination, unless she shall have completed the seventeenth year of her age."

2. By substituting for the words "First Year" in the seventh clause of the same, the words "First and Second Years."

3. By inserting between the words "First" and "Year" in the eleventh clause of the same, the words "or Second."

4. By inserting after the groups of subjects of the Second Examination, the following clause :—

THIRD EXAMINATION.

Group .....
Group .....

The Report of the Finance Committee presented at the last meeting of the Senate was considered.

Moved by the Vice-Chancellor, seconded by Prof. Loudon, and carried, that the Report be adopted on the understanding that the scheme for an increase of Fees be further considered, when a report from the College Council on the question shall have been obtained.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, May 9th, 1882.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Dr. Larratt Smith, Mr. Gibson, Prof. Loudon, Dr. Thorburn, Mr. King, Dr. McFarlane, Mr. McQuesten, Mr. Falconbridge, Mr. Taylor, Prof. Galbraith, Mr. Houston, Rev. Principal Caven, Rev. D. J. Macdonnell.

Letters were read—

(1) From upwards of 200 undergraduates of the University asking for the abolition of Scholarships.

(2) From N. H. Beemer, M.D., asking that graduates in Medicine of the University be allowed to enter the LL.D. Course at the Second Examination.

Mr. Falconbridge gave notice, that at the next meeting of the Senate he would introduce a statute or resolution respecting the Department of Greek and Latin Classics in the Faculty of Arts.

Mr. King gave notice, that at the next meeting of the Senate he would introduce a statute regulating the mode of election to the offices of Vice-Chancellor, Registrar and Solicitor of the University.

The Vice-Chancellor gave notice that, at the next meeting of the Senate, he would introduce a statute extending the examinations at affiliated Colleges to the work of the Third and Fourth Years.

Mr. King gave notice that, at the next meeting of the Senate, he would move that the Committee appointed to consolidate the Statutes of the University do proceed with their work forthwith, and report progress within three weeks.

The Vice-Chancellor presented the following report :

To the Senate, etc. :—

Gentlemen,—The undersigned scrutineers appointed to act at the counting of votes cast during the election of members of the Senate for 1882, have the honour to report as follows :

To represent Convocation on the Senate: John Galbraith, M.A., C.E., William Oldright, M.A., M.D., and William Houston, M.A., were elected, the vote standing :

Mr. Galbraith	272.
Dr. Oldright	265.
Mr. Houston	259.
Judge Boyd	161.

All which is respectfully submitted.

W. Mulock, Vice-Chancellor.

W. FITZGERALD, M.A.
A. H. WRIGHT, B.A., M.B. } Scrutineers.

May 3rd, 1882.

Mr. Houston gave notice that at the next meeting of the Senate, he would introduce a Statute to amend the Statute respecting Local Examinations for Women, so as to admit male as well as female candidates.

The Senate adjourned to Thursday, May 11th, it being understood that the next meeting should be on the Monday following.

Confirmed.

W. MULOCK,
Vice-Chancellor.

Minutes of a meeting of the Senate, held in the Senate Chamber, May 11th, 1882.

Present :—The Vice-Chancellor, Dr. Wilson, Rev. Father Vincent, Mr. McMurchy, Mr. Bethune, Prof. Loudon, Mr. Falconbridge, Mr. Taylor, Prof. Galbraith, Rev. D. J. Macdonnell.

On motion of the Vice-Chancellor, seconded by Mr. McMurchy, the Statute regulating the matter of University Fees was read a first time and referred to a Committee composed of Dr. Wilson, Prof. Loudon, Prof. Galbraith, Mr. Falconbridge, Mr. Taylor, Mr. McMurchy.

Dr. Wilson gave notice that at the next meeting of the Senate, he would introduce a resolution recommending the establishment in University College of a Professorship or Lectureship to embrace the subjects of Civil and Constitutional History and Jurisprudence.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The Statute concerning examinations at affiliated Colleges was read a first time.

On motion of Prof. Loudon, seconded by Prof. Galbraith, The Statute embodying the changes in the Mathematical Department proposed in the report of the Arts Board of Studies was read a first time.

On motion of the Vice-Chancellor, seconded by Mr. Falconbridge, The Statute giving effect to the report of the Committee on Upper Canada College was read a first time.

The Senate adjourned to Monday, May 15th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held at the Senate Chamber, May 15th, 1882.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Dr. Larratt Smith, Mr. Gibson, Mr. Bethune, Prof. Loudon, Dr. Thorburn, Mr. King, Mr. Falconbridge, Mr. Taylor, Prof. Galbraith, Dr. Oldright, Mr. Houston, Rev. Principal Caven, Rev. D. J. Macdonnell, Mr. Justice Patterson.

A letter of date May 13th, 1882, from Angus Morrison, Esq., was read relative to the Solicitorship of the University and of University College.

The report of the Committtee on the Statute respecting Fees was presented, and was adopted on motion of the Vice-Chancellor, seconded by Dr. Wilson.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following Statute was read a second time and passed :

By the Senate, etc. :—

Be it enacted, The following Fees shall be payable to the University of Toronto :

For each examination in the several Faculties there shall be paid by each candidate the sum of five dollars, except that the fee for the Fall Supplemental Examination shall be ten dollars in the case of an undergraduate who has been rejected at the Spring Examination.

There shall be paid—

For each Examination of the Local Examinations for Women, there shall be paid by each candidate, one dollar ;

For admission *ad eundem stratum* (where such is permitted), six dollars ;

For registration of exemption from Matriculation in Medicine, or from Matriculation and the First Year in Law in any of the cases provided by the Statutes, five dollars ;

For admission to a higher year on the certificate of the Head of an affiliated College, five dollars ;

For change of Faculty (where such is permitted), five dollars ;

For the Degree of	LL.B.,	$20 00.
" "	LL.B., after Special Examination	30 00.
" "	LL.D	50 00.
" "	M.B	20 00.
" "	M.D	20 00.
" "	B.A	10 00.
" "	M.A	20 00.
For the Diploma in Civil English		20 00.

For admission *ad eundem gradum* the fees shall be the same as on admission to the like Degree after Examination.

For dispensation from attendance at lectures in an affiliated College, two dollars.

For Certificates of Honour, each, one dollar.

Provided always that it shall be lawful for the Senate to extend the time for or remit the payment of such fees in any case in which the Senate shall deem it proper to do so by reason of the inability of a candidate to pay the same.

Subject to the foregoing provisions, all such fees shall be payable when application is made for Examination, for admission *ad eundem statum*, for registration in any Faculty, for dispensation from attendance at lectures, or for Certificates of Honour, and before the conferment of the degree for which the fee is to be paid.

All statutes respecting fees, in so far as they are inconsistent with this Statute, are hereby repealed.

The foregoing provisions shall take effect on the first day of January, 1883, except that relating to Certificates of Honour, which shall take effect forthwith.

The adoption of the Report of the Committee on Upper Canada College, presented on January 20th, 1882, was moved by the Vice-Chancellor, seconded by Dr. Wilson, and carried, Mr. Gibson dissenting.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The following Statute was read a second time and passed :—

By the Senate, etc. :

Be it enacted, I. The staff of Upper Canada College shall consist of---

A First Classical Master,	A First English Master,
A Second " "	A Second " "
A First Mathematical Master,	A French and German Master, or
A Second " "	A French and a German Master,

and as many assistant masters as may be necessary in addition.

II. That either the First Classical, the First Mathematical, or the First English Master, shall be Principal.

III. That no officer of the College, except as hereinafter provided, shall be entitled to any share of the Fees.

IV. That the salaries and emoluments, except as limited or changed by succeeding clauses, shall be as follows :—

1. The Principal shall be entitled, as Principal and Master, to $2,600 a year and residence.

2. Each other Master of the First Grade shall be entitled to $1,650 a year and residence.

3. Each Master of the Second Grade shall be entitled to $1,200 a year and residence.

4. The French and German Master shall be entitled to $1,350 a year and residence. If at any time it should be found difficult to secure the services of one man competent to teach both languages, a French and a German Master shall be engaged at suitable salaries.

V. That the residences mentioned in the preceding clauses shall, with the exception of the Principal's, be held on the understanding that, whenever an increase of pupils renders an increased accommodation for boarders necessary, the Senate may, through its Committee on Upper Canada College, or otherwise, require that such residences or some of them be used as supplementary boarding houses so long as the same shall be necessary, and shall allow to the masters whose residences may be so utilized such reasonable remuneration therefor, and for their services as resident masters in charge, as to the Committee or Senate shall seem equitable.

VI. That one of the masters of the College shall be Superintendent of the Boarding House.

VII. That the present Superintendent of the Boarding House shall be relieved from teaching at half-past twelve o'clock each day ; that he shall be paid for his services as Master $1,300 a year ; and that he shall be remunerated for his services as Superintendent on the principle laid down in Statute 79, provided always that he shall not receive in any one year under this head a larger sum than $1,000.

VIII. That this Statute shall take effect from the first day of July, 1882.

IX. That all parts of preceding Statutes inconsistent with this Statute are hereby repealed.

On motion of Prof. Loudon, seconded by Prof. Galbraith, The Statute relating to changes in the Department of Mathematics was read a second time, and passed.

On motion of Mr. Falconbridge, seconded by Dr. Oldright, The Statute respecting the Department of Greek and Latin Classics was read a first time, and referred to the Board of Arts Studies.

On motion of Mr. Gibson, seconded by Mr. Bethune, The following Statute was read a first time :—

By the Senate, etc. :

Be it enacted, That be appointed Solicitor of the University, University College, and Upper Canada College.

Moved by Mr. King, seconded by Mr. Houston, and carried, That the Committee appointed to consolidate the Statutes of the University do proceed with their work forthwith, and report progress as soon as possible, the names of Mr. King and Mr. Houston being added to the Committee.

On motion of Dr. Oldright, seconded by Mr. Houston, The Statute extending the Local Examinations for Women so as to embrace the work of the Second Year, was read a first time.

The Senate adjourned to Friday, May 19th, at four o'clock p.m., for the purpose of considering the resolution of Dr. Wilson respecting a Professorship or Lectureship in History and Jurisprudence.

DAN. WILSON,
Chairman.

MINUTES of a Special Meeting of the Senate held at the Senate Chamber, May 19th, 1882.

Present :—Dr. Wilson, Rev. Father Vincent, Mr. McMurchy, Prof. Chapman, Prof. Young, Mr. Taylor, Dr. Oldright, Mr. Houston, Rev. Principal Caven.

In the absence of the Vice-Chancellor, on motion of Prof. Young, seconded by Mr. McMurchy, Dr. Wilson took the chair.

Moved by Dr. Oldright, seconded by Principal Caven, and carried, That the Senate resolve itself into a Committee of the whole to reconsider the clause of the Financial Report of the 13th January, 1882, which recommends the establishment of "two Lecturships, one in Political Economy, and one in Constitutional Law and Principles of Jurisprudence.'

The Committee presented the following Report, which was adopted on motion of Dr. Oldright, seconded by Prof. Young :—

To the Senate, etc. :

GENTLEMEN,—Your Committee beg to recommend that that part of the clause under consideration, referring to the subjects of Constitutional Law and Principles of Jurisprudence, be amended by recommending that the Lieutenant-Governor in Council shall establish in lieu of the present Professorship of History, held in conjunction with that of Rhetoric and English Literature, a separate Professorship to embrace the subjects of History, Constitutional Law, and Jurisprudence.

Moved by Mr. Taylor, seconded by Mr. McMurchy, and carried, That the Senate recommend the Lieutenant-Governor to establish in University College a Professorship of History, Constitutional Law, and Principles of Jurisprudence.

Moved by Principal Caven, seconded by Mr. Taylor, and carried, That a copy of this resolution be transmitted to the Provincial Secretary.

The Senate adjourned.

DAN. WILSON,
Chairman.

MINUTES of a Special Meeting of the Senate held at the Senate Chamber, June 5th, 1882,

Present :—Dr. Wilson (in the Chair), Mr. Crickmore, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Dr. Larratt Smith, Mr. Falconbridge, Mr. Taylor, Prof. Galbraith, Mr. Houston, Rev. Principal Caven, Rev. D. J. Macdonnell, Prof. Loudon.

After dealing with the Report of the Examiners in Arts the Senate adjourned.

MINUTES of a Special Meeting of the Senate held at the Senate Chamber, June 6th, 1882.

Present :—Dr. Wilson, Mr. Crickmore, Mr. Buchan, Prof. Loudon, Mr. Taylor, Prof. Galbraith, Mr. Houston.

On motion of Prof. Loudon, seconded by Mr. Taylor, Dr. Wilson took the Chair.

A letter was read from F. A. Vines, B.A., (Oxon), asking for admission *ad eundem gradum*..

On motion of Mr. Taylor, seconded by Prof. Loudon, it was decided Mr. Vines be admitted *ad eundem gradum*.

After adopting the report of the Examiners in Law, the Senate adjourned.

MINUTES of a meeting of the Senate, held at the Senate Chamber, June 8th, 1882.

After meeting in the Senate Chamber, the Senate proceeded to the Convocation Hall, where Degrees were conferred and other proceedings had as appears of record in the Book of Convocation.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, July 26th, 1882.

Present :—The Vice-Chancellor, Mr. Crickmore, Mr. Buchan, Rev. Father Vincent, Dr. Larratt Smith, Prof. Loudon, Mr. King, Mr. Falconbridge, Dr. Oldright, Mr. Houston, Judge Cameron, Mr. Caven, Judge Patterson.

The minutes of last meeting were read and confirmed.

The Vice-Chancellor presented a report from the Committee on Upper Canada College, respecting certain proposed modifications in the course in that institution. The report was received and ordered to be printed and distributed to members of the Senate, the Vice-Chancellor giving notice of his intention to move the adoption of the report.

Mr. Houston gave notice that, at the next meeting of the Senate, he would introduce a statute repealing the proviso on page 3 of the Arts Curriculum, which requires, that in all cases attendance on a full course of lectures of either the 2nd, 3rd, or 4th year at such affiliated College shall be required.

Mr. King gave notice of his intention to introduce the following motion at the next meeting of the Senate :

That in view of the present financial condition and increased requirements of the University, it is not desirable that the grants heretofore made out of the income fund for Scholarships should be continued, and, that from and after the day of all such grants should cease, and the moneys unexpended therefor be appropriated for purposes more generally beneficial.

The Vice-Chancellor gave notice of his intention to introduce a statute to extend the provisions of Statute CXXXVI., so as to apply to the Department of Mental and Moral Science.

Prof. Loudon gave notice that, at the next meeting of the Senate, he would move a resolution embodying the following regulations :—

1. Instead of the present system of Examination in the Faculty of Arts in the University and affiliated Colleges, there should be substituted five Examination, viz : for

Junior Matriculation, First Year, Second Year, Third Year and B.A. Of these the University shall conduct the first, second and last, the remaining Examinations being conducted at the same time by the affiliated Colleges.

2. Honour Candidates shall be arranged alphabetically in three classes, the minima for these being 75, 62 and 50 p. c. respectfully.

3. There shall be no scholarships, medals or prizes awarded, except at the Examinations for Junior Matriculation and First Year.

Mr. King's statute respecting the election of the Vice-Chancellor, Registrar and Solicitor, was read a first time.

The Senate adjourned to the call of the chair.

It was ordered that all sundry business not specially dealt with should stand over.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held at the Senate Chamber, August 4th, 1882.

Present:—The Vice-Chancellor, Mr. Buchan, Rev. Father Vincent, Dr. Larratt Smith, Prof. Loudon, Mr. Houston, Mr. Justice Cameron, Mr. Falconbridge, Dr. Oldright.

The Vice-Chancellor moved, seconded by Dr. Larratt Smith, the adoption of the report of the Committee on Upper Canada College.—*Carried.*

On motion of the Vice-Chancellor, seconded by Dr. Oldright, the following statute was read a first time :

By the Senate, etc. :

Be it enacted, That Statute No. CXXXVI. be amended by inserting therein after the words "excepting that in the Departments of," the words "Mental and Moral Science and Civil Polity," and that this statute shall be applicable to all candidates at the Examinations of 1881 and thereafter.

Unfinished business was allowed to stand.

The Senate adjourned to the call of the chair.

The following is the report on Upper Canada College referred to above.

The Committee on Upper Canada College having again had under consideration that part of the Memorandum of the Hon. the Minister of Education, dated May 31st, 1881, which relates to educational measures, beg leave to report as follows :—

1. *Dual Promotion.*.—In order to give greater flexibility to the course of instruction, the Committee recommend that a system of Dual Promotion be adopted. For this purpose the subjects of study should be arranged in two groups, one having the ancient classics, the other mathematics for its leading branch, and the pupils should, as far as possible, be promoted in each group without reference to their proficiency in the other.

2. *Encouragement of Special Proficiency.* Inasmuch as the curriculum, the system of marking and the method of giving prizes at present in operation, tend to cause the pupils in the upper forms to dissipate their energies over a wide field, it is recommended that steps be taken to remedy these defects. In particular the Committee recommend an alteration of the relative values of the Exhibitions offered for competition, and a change of the basis on which they are awarded. At present eight Exhibitions are annually offered for competition, on a general proficiency basis at the examinations for promotion from the Fourth to the Fifth, and the Fifth to the Sixth Form. All entitle the holder to free tuition for one year, and the holder of the first in each Form receives in addition eighty dollars ; the holder of the second, fifty dollars in money. The Committee propose that hereafter the eight Exhibitions shall be of equal value, that is, that each shall entitle the winner to free tuition and thirty dollars in money ; and that in each form, one shall be awarded to the candidate standing highest in Classics, one to the highest in Mathematics, one to the highest in Modern Languages with History and Geography, and one to the highest in General Proficiency. No Exhibition should, however, be given to

any candidate who fails to be promoted to the next higher form in both the Classical and and Mathematical groups. If two or more Exhibitions are awarded to the same candidate, the same regulations should prevail as govern similar cases at Junior Matriculation.

3. *Revival of Commercial, Scientific or Modern Course.*—In order to provide more fully for the wants of pupils not destined for the University or any learned profession, the Committee recommend the revival of the *Commercial, Scientific or Modern Course.* The obligatory subjects in the course should be (1) English, (2) French or German, (3) History, (4) Geography, (5) Chemistry, (6) Arithmetic, (7) Algebra, (8) Geometry, (9) Writing, (10) Book-keeping. The Principal and Masters should decide in which order these subjects are to be taken up and how many and which are to be studied concurrently.

All which is respectfully submitted.

W. MULOCK,
Vice-Chancellor.

July 20th, 1882.

MINUTES of a meeting of the Senate, held at the Senate Chamber, October 5th, 1882.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Buchan, Dr. Fulton, Dr. Ogden, Prof. Wells, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Dr. Richardson, Prof. Loudon, Dr. Graham, Mr. King, Dr. McFarlane, Mr. McQuesten, Mr. Falconbridge, Mr. Taylor, Prof. Galbraith, Mr. Houston, Rev. Principal Caven, Hon. Wm. McMaster, Mr. Justice Cameron, Mr. Macdonald.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following Statute was read a second time and passed:

By the Senate, etc.:

Be it enacted, That Statute No. CXXXVI. be amended by inserting therein after the words "excepting that in the Departments of," the words "Mental and Moral Science and Civil Polity;" and that this Statute shall be applicable to all candidates at the Examinations of 1881, and thereafter.

Moved by Dr. McFarlane, seconded by Mr. McQuesten, That the Statute appointing a Solicitor be read a second time.

Moved in amendment by Mr. King, seconded by Mr. Falconbridge, That the second reading of this Statute be deferred.

The amendment was lost and the original motion declared carried.

Moved by Dr. McFarlane, seconded by Mr. McQuesten, That the blank in the Statute be filled by inserting the name of W. Macdonald, M.A.

Moved by Mr. Falconbridge, seconded by Mr. Taylor, That the blank be filled by the name of Hon. R. M. Wells.

The vote for the Candidates for the Solicitorship was then taken, and resulted as follows:

For Mr. Macdonald—Prof. Wells, Mr. Houston, Mr. Langton, Prof. Loudon, Dr. Richardson, Rev. Principal Caven, Dr. Ogden, Dr. Graham, Mr. McQuesten, Dr. McFarlane, Mr. McMaster, Mr. Macdonald, Dr. Fulton, Mr. Justice Cameron, Prof. Galbraith, Mr. King.—Total 16.

For Mr. Wells—Mr. Taylor, Mr. Falconbridge, Rev. Father Vincent.

On motion of Dr. McFarlane, seconded by Mr. McQuesten, The following Statute was read a second time and passed:

By the Senate, etc.:

Be it enacted, That William Macdonald, M.A., be and he is hereby appointed Solicitor to this University in the place of Angus Morrison, Esquire, deceased.

The first reading of Mr. Buchan's Statute relating to Exhibitions in Upper Canada College was moved by Mr. Buchan, seconded by Prof. Loudon.

Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, October 12th, 1882.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Dr. Larratt Smith, Dr. Richardson, Prof. Loudon, Dr. Graham, Dr. McFarlane, Mr. Falconbridge, Mr. Taylor, Prof Galbraith, Mr. Houston, Rev. Principal Caven, Judge Cameron.

The Vice-Chancellor gave notice that at the next meeting of the Senate he would move the following resolution :

1. That it is in the interest of the University that the management of its property and the control of its expenditure be by Statute vested in the Senate, who shall exercise such power in manner approved of by the Lieutenant-Governor in Council.

2. That the surplus income remaining at the close of any fiscal year shall thereafter form part of the capital funds of the University.

The Vice-Chancellor presented the following report of the Board of Arts Studies, which was received on motion of the Vice-Chancellor, seconded by Dr. Wilson, Mr. Falconbridge dissenting :

To the Senate, etc. :—

GENTLEMEN,—The Board of Studies, Arts Division, to whom were referred the letters of the Minister of Education, dated the 12th and 18th of September last and 3rd of October instant, beg to recommend as follows :

That the Curriculum in the Faculty of Arts be amended on page nine by inserting after the words and figures "1883—Marmion, with special reference to Canto V.," the following words :—"or Lady of the Lake, with special reference to Cantos V. and VI., at the option of the candidate."

All which is respectfullly submitted.

W. MULOCK,
Vice-Chancellor.

Toronto, October 10th, 1882.

The adoption of the report was moved by the Vice-Chancellor, seconded by Dr. Wilson.

Moved in amendment by Mr. Buchan, seconded by Mr. Houston, That the report on "Marmion" be referred to the Committee for reconsideration.

The amendment was lost.

The original motion that the report be adopted was carried.

On motion of Mr. Buchan, seconded by Dr. Larratt Smith, The following Statute was read a second time and passed :

By the Senate, etc.:

Be it enacted, 1. In place of all Exhibitions heretofore established in Upper Canada College there shall be founded eight exhibitions, each of which shall entitle the holder to free tuition for one year and thirty dollars in money.

2. Four of these shall be annually awarded for proficiency in the work of the Fourth Form, and four for proficiency in that of the Fifth Form, according to the following scheme :

One in each form to the candidate who, having passed a satisfactory examination in a sufficient number of subjects to enable him to matriculate in the University of Toronto, shall stand highest in the Ancient Classics.

One in each form, on the same conditions, to the candidate who shall stand highest in Mathematics.

One in each form, on the same conditions, to the candidate who shall stand highest in the Modern Languages, with History and Geography.

One in each form, on the same conditions, to the candidate who shall stand highest in General Proficiency.

3. No student shall hold more than one exhibition at the same time ; but if two or more exhibitions have been awarded to him he shall be entitled to receive twelve dollars

out of each additional exhibition, his exhibition being called a Double, Triple, etc. exhibition, as the case may be ; and the exhibitions thus diminished may be awarded to the candidates next in rank in proportions to be decided by the Examiners.

4. The examinations shall be held at the end of the summer term. The Exhibitions shall be open for competition to the whole Province, and they shall be tenable for one year by pupils attending regularly at Upper Canada College, or at any High School or Collegiate Institute in Ontario.

5. All persons who intend to become candidates, in any year, for these Exhibitions shall give notice to the Principal of Upper Canada College, on or before the eighth day of June in that year.

6. The Principal of Upper Canada College shall annually name Examiners to conduct the Exhibition Examinations and report the results to him.

7. All preceding Statutes, or parts of Statutes, relating to Exhibitions in Upper Canada College are hereby repealed.

The Senate adjourned to the call of the chair.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 30th, 1882.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Ogden, Mr. McMurchy, Mr. Gibson, Prof. Loudon, Dr. McFarlane, Mr. King, Mr. McQuesten, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. McMaster.

On motion of the Vice-Chancellor, seconded by Dr. Wilson. The Statute introduced by the Vice-Chancellor, abrogating the writing of Theses for the Degrees of M.D. and M.A.. was read a first time.

The report of the Committee appointed to make arrangements with the Dominion Government respecting the Observatory property was presented and received. Its consideration was deferred.

Moved by Dr. Oldright, seconded by Mr. Houston, and carried, That the Statute introduced by Dr. Oldright respecting local examinations for women, and which has received its first reading, be referred to the Board of Arts Studies.

It was ordered that Prof. Loudon's resolutions, proposing alterations in the mode of conducting examinations in the University and at affiliated Colleges, notice of which has been given, be printed and sent to the members of the Senate.

Mr. King gave notice that, at the next meeting of the Senate, he would move that the following words be added to his proposed motion in regard to the abolition of scholarships :—" That it is not desirable that University Medals should be abolished, but that the charge therefor should still be a charge on the income fund."

It was ordered that the foregoing proposed resolution of Mr. King, with his of July 26th, be printed and sent to members of the Senate.

On motion of Mr. Crickmore, seconded by Dr. Wilson, Mr. Mulock was unanimously re-elected Vice-Chancellor for the two years succeeding December 31st prox.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, December 8th, 1882.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Mr. Gibson, Prof. Loudon, Mr. King, Mr. McQuesten, Prof. Galbraith, Dr. Oldright, Mr. Houston, Rev. Principal Caven.

Mr. Langton presented the following report of the Committee on Observatory Property, which was referred to the Board of Management, on motion of Mr. Langton, seconded by Dr. Wilson :—

To the Senate, etc :

GENTLEMEN,—The Committee appointed to negotiate with the Dominion Government respecting the Observatory, beg leave to report that they had several meetings with Mr. Lash, who was acting for the Dominion Government, and the final conclusions were as follows :—

(1) That the residence of the late Professor of Meteorology should be given up to the University.

(2) That the two northernmost cottages which are not on the Observatory lot should be given up to the University, but that the University would not take possession until the Dominion Government had had time to provide other residences for the observers.

(3) That the Dominion Government should sanction the present road through the Observatory property, which was opened when the University had the control of the Observatory.

(4) That the University would add a small strip of land on the south side of the Observatory lot for the convenience of the outbuildings situated there.

Subsequently application was made to the Dominion Government to allow a foot-road to be opened through part of the Observatory property to communicate with St. George Street, for the convenience of the numerous students who have to come from Knox College and the Western part of the city, but after a good deal of delay this proposition was declined.

After Mr. Lash had retired from office, Mr. J. A. Macdonnell was appointed to act for the Dominion Government, and the old arrangements were discussed over again, and agreed to with one slight modification. Mr Carpmael thought that the Observatory had no need of the additional land which it had been proposed to give on the southern boundary of the Observatory lot ; but instead of this it was agree to that the University should pledge itself to allow no buildings or anything else, which might be injurious to the Observatory, to be erected on that small piece of land between the road laid out as a crescent and the Observatory lot.

Mr. Macdonnell had prepared a deed embodying these provisions, and everything seemed to be amicably settled. The Board of Management, therefore, took possession of the late residence of the Professor of Meteorology, as several disreputable persons were making use of it, and doing a great deal of damage. The Board had an estimate made of the sum necessary to put the house in thorough repair, and had even commenced some of the repairs, and had an offer to rent the house, when another difficulty arose. Mr Crooks wrote to Mr. Macdonnell to the effect that the question rested altogether with the Provincial Government, and he was not prepared at present to come to any definite conclusion. He also wrote to the Bursar not to accept any possession which might be given by the Dominion Government, or to assume to deal with the property until matters were finally settled.

The Vice-Chancellor subsequently received a communication from Mr. Crooks which was referred to us by the Senate. The principal points which Mr. Crooks raises are the following :—(1) He contends that the part of the Observatory lot between the road and the western boundary, is not used for scientific purposes, but only for residences for the observers, and that it ought to be ceded to the University. The Committee cannot assent to this, the residences, some of which were built by the University itself when it had the management of the Observatory, form a necessary part of the whole institution. (2) He urges that the present road should not be a public road. To this the Committee assent. What the University contended for, was that we should have the right of way along that road, but it would be like other roads in the Park subject to the control of the University. The deed, moreover, prepared by Mr. J. A. Macdonnell, clearly makes it a public road, and in this respect the deed should be amended. (3) He argues that the right to put up any other buildings for scientific purposes on the Observatory lot should

be limited, the assent of the University being first obtained for any such buildings. It does not appear probable that the Dominion Government would wish to put up any buildings which would be objectionable to the University; but if the Dominion Government assent to this limitation, the deed prepared by Mr. Macdonnell may be altered accordingly.

All which is respectfully submitted.

On behalf of the Committee. JOHN LANGTON.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The following resolution was adopted:

That this Senate recommends that there be appointed in University College, a Demonstrator of Physics, whose duties it shall be to assist the Professor of Natural Philosophy in the teaching of Physics, and in the care of the Physical Apparatus, and who shall, in the discharge of his duties, be under the direction of the Professor of Natural Philosophy, and that the salary attaching to such office be at the rate of twelve hundred dollars a year, and that such appointment be made on the recomendation of the College Council;

That a copy of this resolution be forwarded to the Council of University College, with a view to its consideration by the Council, and if approved of, to effect be given to it by Statute of the Council.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following resolution was adopted:

1. That the Senate recommends the establishment in University College of nine Fellowships in the respective Departments and Sub-Departments following, namely:—Two in Classics, one in Mathematics, one in Physics, one in Chemistry, one in Mineralogy and Geology, one in Natural History, one in French and German, and one in English: but that the Council of the College may, if it deems it advisable, establish a Lectureship in English and History, in lieu of the Fellowship in English and History and one of the Fellowships in Classics, and when it deems it advisable from time to time may revive such last mentioned fellowships, and during such period suspend such Lectureship.

2. That it shall be the duty of a Fellow to assist in the work of instruction, and to pursue some special line of study, under the direction of the Professor of the Department in respect of which such Fellow is appointed.

3. It shall be the duty of the Lecturer under the direction of the Professor of English and History, to assist such Professor in the work of his Department.

4. That such Fellows and Lecturers be appointed from amongst the graduates of the University of Toronto, on the recommendation of the College Council.

5. That the salary of a Fellow be at the rate of five hundred dollars a year, and that of said Lecturer at the rate of one thousand dollars a year.

6. That the term for which such Fellowship shall be held shall not exceed three years, and the Fellow shall not be eligible for re-appointment.

7. That a copy of this resolution be forwarded to the Council of University College, with a view to its consideration by the Council, and if approved of, to effect being given to it by Statute of the Council.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following Statute was read a second time:—

By the Senate, etc.:

Be it enacted, 1. That the following are the requisites for admission to the Degree of M.D., viz., Having been admitted to the Degree of M.B., and being of one year's standing from admission to the Degree of M.B.

2. That the following are the requisites for the Degree of M.A., viz., Having been admitted to the Degree of B.A., and being one year's standing from admission to the Degree of B.A.

Moved in amendment by Mr. McQuesten, seconded by Mr. King, and carried. That the following clause be added to the Statute as to requirements for the Degree of M.A.: "and sending in an improved Thesis in some subject in the Faculty of Arts." And for the Degree of M.D.: "and sending in an improved Thesis in some subject in the Faculty of Medicine."

The Statute as amended was read a second time and passed, on motion of Mr. McQuesten, seconded by Mr. King.

The Senate adjourned to Friday, December, 22nd.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, December 22nd, 1882.

Present:—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Dr. Fulton, Mr. McMurchy, Prof. Loudon, Mr. King, Dr. McFarlane, Mr. McQuesten, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston.

The Vice-Chancellor presented the Annual Report of the Senate to the Government, which was adopted on motion of the Vice-Chancellor, seconded by Dr. Wilson.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move that, in the opinion of the Senate, any extra fees heretofore paid or hereafter to be paid to the Professors of University College by Students of that College for special courses of lectures in the College, or in the School of Practical Science, should go into the general income fund of the University and College.

Mr. Houston gave notice that at the next meeting of the Senate, he would move that, with a view to lessening the charge on the general income fund of Toronto University and University College, and to affording increased facilities for the work of both institutions, the Residence in connection with University College should be discontinued.

Mr. Falconbridge gave notice that, at the next meeting of the Senate, he would move a resolution throwing open the ordinary meetings of Senate to members of Convocation, and to the representatives of the press.

Dr. Wilson gave notice that, at the next meeting of the Senate, he would move the appointment of a Committee to carry out the proposal for the endowment of a Scholarship, or Scholarships, as a memorial of the late Vice-Chancellor, Chief Justice Moss, and to report on the advisability of making such Scholarship pertain to University College.

The Senate adjourned to Friday, January 5th, 1883.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate held in the Senate Chamber, January 5th, 1883.

Present:—Dr. Wilson, Mr. Buchan, Dr. Ogden, Rev. Father Vincent, Prof. Loudon, Dr. McFarlane, Mr. McQuesten, Mr. Falconbridge, Mr. Taylor, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. McMaster, Judge Patterson.

In the absence of the Vice-Chancellor, on motion of Prof. Loudon, seconded by Mr. Falconbridge, Dr. Wilson took the Chair.

On motion of Dr. Wilson, seconded by Mr. Falconbridge, the following resolution was adopted:—

Resolved, That the Senate have learned with much sorrow of the death of Mrs. Mulock, a lady, who, by her generous endowment of a Scholarship in this University, has left behind her an enduring evidence of her interest in the progress of higher education in Canada. They desire to record on their Minutes, and to convey to the Vice-Chancellor, their deep sympathy in the loss which he has sustained by her death.

Mr. Houston's motion respecting discontinuance of Residence, was withdrawn.

The Senate adjourned to the call of the chair.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, February 1st, 1883.

Present:—The Vice-Chancellor, Dr. Wilson, Rev. Father Vincent, Mr. McMurchy, Prof. Loudon, Mr. King, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Rev. Principal Caven, Rev. D. J. Macdonnell.

On motion of Dr. Wilson, seconded by Mr. King, the following resolution was adopted :—

That a Committee be appointed to carry out the proposal for the endowment of a Scholarship, or Scholarships, as a memorial of the late Vice-Chancellor, Chief Justice Moss, the Committe to consist of the Vice-Chancellor, Prof. Loudon, Principal Buchan, Mr. McQuesten, Mr. McMurchy, Dr. Smith, Judge Patterson, Dr. Oldright, Mr. Houston, and the mover and seconder, Prof. Loudon to be convener.

Prof. Loudon gave notice that, at the next meeting of the Senate, he would introduce a statute enacting that the First Classical Scholarship at the Junior Matriculation Examination be henceforth called the "Mary Mulock Scholarship," in honour of the late Mrs. Mulock, a benefactress of this University.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following resolution was adopted :—

That the Senate learn with great pleasure of the honourable and well-merited promotion of Mr. T. W. Tayor to the position of a Judge in the Court of Queen's Bench, in the Province of Manitoba, and while they regret the loss they must thereby sustain in no longer enjoying the benefit of his valuable services as a member of this Senate, they cordially wish him the long enjoyment of his well-earned elevation to the Bench.

The Senate adjourned to the call of the chair.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, May 25th, 1883.

Present:—The Vice-Chancellor, Mr. Crickmore, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Prof. Loudon, Mr. King, Mr. McQuesten, Dr. Oldright, Mr. Houston.

Prof. Loudon gave notice of his intention to move at the next meeting of the Senate:

1. That it is desirable, in order to encourage the pursuit of special studies amongst the Honour Graduates in Arts in this University, to establish the Degree of Ph. D.

2. That a candidate for the said Degree, must present evidence of having pursued some special line of study (such, *e.g.*, as Electricity, Chemistry, Optics, Astromony, etc.,) at an approved University for at least two years; and shall either undergo an examination, or submit for approval a paper or Thesis, or some subject connected with the special course aforesaid.

3. That special Examiners shall be appointed for the purposes of the said examination, and that the Degree shall be conferred only on those candidates who shall be specially recommended therefor.

Mr. Houston gave notice that, at the next meeting of the Senate, he would introduce a statute providing for the acceptance of the Ontario High School Intermediate Examination, with Latin included, as a substitute for the Pass Matriculation prescribed by the Senate, in the Faculty of Medicine.

Moved by the Vice-Chancellor, seconded by Mr. King, and carried, that the following be a Committee to strike standing Commitees for the year : The Chancellor, Vice-Chancellor, Mr. Crickmore, Prof. Loudon, Dr. McFarlane and Mr. Houston.

The Vice-Chancellor presented the following report of the Scrutineers at the Senate election of 1883, which was received :—

To the Senate, etc. :

GENTLEMEN,—The undersigned Scrutineers appointed to act at the counting of votes cast during the election of members of the Senate for 1883, have the honour to report as follows :

To represent Convocation on the Senate, John Morrison Gibson, M.A., James Henry Richardson, M.D., and James Bethune, LL.B., Q.C., were elected, the vote standing :

Mr. Gibson	286	Mr. Bethune	254
Dr. Richardson	254	Mr. Cameron	150

To represent High School Masters of Ontario, on the Senate, Archibald McMurchy, M.A., was elected, the vote standing :—

Mr. McMurchy	34	Mr. A. Purslow	2
Mr. H. E. Kennedy	1	Mr. J. Seath	1

All which is respectfully submitted.

W. T. BOYD,
W. FITZGERALD, } Scrutineers.

J. LOUDON,
Acting for Vice-Chancellor.

May 2nd, 1883.

Dr. Oldright gave notice that, at the next meeting of the Senate, he would move that the resolution of the Senate under which the Moss Scholarship Committee was appointed be reconsidered, so far as to allow of that Committee recommending some more general and conspicuous form of memorial of the late lamented Vice-Chancellor, if it be deemed practical to do so.

The Vice-Chancellor gave notice that, at the next meeting of the Senate, he would introduce a statute enabling the Senate, under certain circumstances, to relieve candidates in Arts, from attendance at Lectures in affiliated Colleges.

Mr. McQuesten gave notice that, at the next meeting of the Senate, he would introduce a Statute to enable William Smith, a 4th year undergraduate in Arts, to proceed to his Degree of B.A. this year, without attending lectures at University College, or any affiliated College, as at present by Statute required.

The Vice-Chancellor's notice of motion as to management of finances of the University was discharged.

Moved by Mr. Houston, seconded by Mr. King, and carried, That the motion of which notice has been given by Mr. Houston, respectiing special fees paid to professors in University College, be referred to a special Committee with instructions to ascertain and report whether and to what extent such fees have been paid ; and also to state any other circumstances that the Committee sees fit to report ; the Committee to consist of the Vice-Chancellor, Mr. Falconbridge, Mr. Crickmore, Mr. King, Dr. McFarlane and the mover, the Vice-Chancellor to be convener.

On motion of Prof. Loudon, seconded by Dr. Oldright, the Statute respecting the "Mary Mulock Scholarship" was read a first time.

The Senate adjourned to Tuesday, May 29th, at 8 p m.

W. MULOCK,
Vice-Chancellor.

Minutes of a meeting of the Senate, held at the Senate Chamber, May 29th, 1883.

Present :—The Vice-Chancellor, Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Prof. Wright, Prof. Loudon, Dr. Thorburn, Mr. King, Dr. McFarlane, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Gibson, Dr. Richardson.

A letter was read from Mr. Justice Taylor, acknowledging the receipt of the resolution of the Senate congratulating him on his elevation to the Manitoba Bench.

On motion of the Vice-Chancellor, seconded by Mr. Langton, the Vice-Chancellor's Statute respecting attendance at lectures at an affiliated Colleges was read a first time.

It was decided on motion of Prof. Loudon, seconded by Mr. Langton, that the Statute respecting the "Mary Mulock Scholarship," read a first time at last meeting, be rearranged as two Statutes.

On motion of Prof. Loudon, seconded by Mr. Langton, the following Statute was read a second time and passed :—

To the Senate etc. :

Be it enacted, That the Arts Curriculum be amended by inserting on page 31, line 5 after the word "classics," the words "The Mary Mulock Classical Scholarship," and by adding on page 34 the following paragraph :—

The Mary Mulock Classical Scholarship.—The late Mrs. Mulock, having donated the sum of $2,000 (which with accured interest amounts to $2,250) for the encouragemt of the study of the Greek and Latin Classics, a Scholarship of the value of $120 will be annually offered for competition at the Junior Matriculation Examination, and shall be known as "The Mary Mulock Classical Scholarship."

On motion of Prof. Loudon, Seconded by Mr. Langton, The following Statute was read a second time and passed :—

By the Senate etc :

Be it enacted, That the Scholarship in Classics heretofore awarded at the Junior Matriculation Examination, be and the same is abolished in consequence of the endowment of a like Scholarship in lieu thereof by the late Mrs. Mary Mulock.

It was decided that Prof. London's resolution to create the Degree of Ph.D. be printed and distributed to members of the Senate.

Mr. Houston's Statute respecting acceptance of Intermediate High School Examination in lieu of Matriculation in Medicine was, on motion of Mr. Houston, seconded by Mr. Crickmore, read a first time and referred to the Board of Arts and Medical Studies.

On motion of Dr. Oldright, seconded by Mr. King, The following resolution was adopted :

That the Committee on the Moss Memorial be instructed, in creating the fund for the establishment of a Scholarship to be known as "The Moss Scholarship," to obtain sufficient subscriptions, and to procure a suitable portrait of the late Vice-Chancellor to be placed in the University Buildings.

On motion of Prof. Loudon, seconded by Mr. Buchan, The first clause of Prof. Loudon's resolution as to Examinations was adopted as follows :—

1. That instead of the present system of Examinations in the Faculty of Arts in the University and affiliated Colleges, there be substituted five Examinations, viz :—For Junior Matriculation, First Year, Second Year, Third Year, and B.A. Of these the University shall conduct the first, second and last, the remaining Examinations being conducted at the same time by the affiliated Colleges.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, June 5th, 1883.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Crickmore, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Mr. Langton, Prof. Wright, Prof. Pike, Prof. Loudon, Dr. Thorburn, Dr. Graham, Prof. Galbraith, Mr. Gibson, Dr. Richardson, Mr. McQuesten, Mr. Falconbridge, Rev. D. J. Macdonnell.

Prof. Galbraith gave notice of his intention to introduce, at the next meeting of the Senate, two statutes :—

I. To abolish the School of Civil Engineering in the University of Toronto.

II. To establish the Degree of C.E., to be granted to Graduates in Civil Engineering of the School of Practical Science who have spent three years in Professional Work and have sent in an approved essay on some engineering subject.

The following Report of the Joint Committee of Boards of Arts and Medical Studies was presented, read, and received :—

To the Senate, etc. :

Gentlemen,—The Joint Committee of the Boards of Medical and Arts Studies, to whom was referred the Statute proposing to accept the Intermediate High School Examination with Latin, French and German in lieu of Matriculation Examination in Medicine, beg to report that on examining the course prescribed for the Intermediate, they find that Algebra (to Quadratics), Euclid (Bk. I., II., and III.) and History and Geography may be omitted therefrom, which subjects are obligatory at the Matriculation Examination in Medicine as now existing. The examinations therefore are not equivalent.

All which is respectfully submitted.

DAN. WILSON,
Chairman.

June 5th, 1883.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following Statute was read a second time and passed :—

By the Senate, etc. :

Be it enacted, That Undergraduates are required to attend, as Matriculated Students, one of the Colleges affiliated to the University of Toronto ; but in special cases, upon adequate reason being shewn for asking exemption, the Senate may dispense with this rule.

It was decided that the application of Mr. Smith to be admitted to his Degree should be brought up on Friday at a special meeting before commencement, if the preceding Statute had at that time received the sanction of the Lieutenant-Governor.

On motion of Prof. Wright, seconded by Prof. Pike, Prof. Wright's statute, amending the Arts Curriculum in the Department of Natural Sciences, was introduced and ordered to be printed and distributed to members of the Senate.

The Senate adjourned to Friday, June 8th, and afterwards to the call of the chair.

Confirmed.

WM. CAVEN,
Chairman.

Minutes of a meeting of the Senate held at the Senate Chamber, June 8th, 1883.

After meeting in the Senate Chamber the Senate proceeded to the Convocation Hall, where degrees were conferred and other proceedings had, as appears of record in the Book of Convocation.

Confirmed.

W. MULOCK,
Vice-Chancellor.

Minutes of a meeting of the Senate held at the Senate Chamber, July 31st, 1883.

Present :—Rev. Father Vincent, Mr. McMurchy, Prof. Loudon, Dr. Thorburn, Dr. Oldright, Mr. Houston, Rev. Principal Caven.

On motion, Rev. Principal Caven took the Chair.

A letter was read from the Assistant Provincial Secretary, informing the Senate of the approval by His Honour the Lieutenant-Governor, of Statutes CXLVI. and CXLVII. of the University.

A letter was read from the Registrar of Trinity College, Toronto, asking the Senate to appoint representatives to meet representatives of Trinity College and other Universities to discuss the question of University fees.

It was decided that the consideration of the letter of the Registrar of Trinity College be deferred until next meeting of the Senate.

Messrs. T. C. Robinette and G. Hunter were introduced, and presented with the Lorne Medals won by them at the May Examinations, Mr. Robinette receiving the Gold Medal, and Mr. Hunter the Silver.

Senate adjourned to call of chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, September 28th, 1883.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Crickmore, Mr. Buchan, Mr. McMurchy, Prof. Pike, Prof. Loudon, Mr. McMaster.

Dr. Wilson gave notice that, at the next meeting of the Senate, he would move that the Chancellor, Vice-Chancellor and Principal of Upper Canada College be appointed to act with members, to be named by the Council of University College in accordance with the recommendation of the Board of Management, to consider the question of a Superannuation Fund and the basis of retiring allowances to the officers, professors, teachers and employees of the University College and Upper Canada College.

The Senate adjourned to call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, October 20th, 1883.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Prof. Wright, Prof. Pike, Prof. Loudon, Dr. McFarlane, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Gibson, Dr. Richardson, Mr. McMaster.

In the matter of a conference between the authorities of Canadian Universities on the subject of University Fees, to which the letter from the Registrar of Trinity College presented at last Senate meeting had reference, the Registrar was directed to inform the Registrar of Trinity College that the question of Fees had been recently settled by this Senate, and that it was deemed inadvisable at so early a day to re-open the matter.

Mr. Gibson gave notice that at the next meeting of the Senate, he would move that the Legislature be petitioned to amend the University Act by empowering the Senate to provide for conferring the Degree of LL.D., *honoris causa* only.

The rule requiring notice of motion to be given was suspended, and on motion of Mr. Houston, seconded by Prof. Galbraith, the following resolution was adopted:

That the Minister of Education be requested to furnish the following statistics of expenditure out of the general income fund of the University and College:

1. The amount paid annually for the years 1879-83 inclusive for Scholarships in the University, specifying the sums for the different Faculties.

2. The amount paid during the same period for University and College prizes of all kinds.

Mr. Buchan gave notice of his intention to introduce at the next meeting of the Senate, a Statute to amend the Curriculum in the Faculty of Arts.

Moved by Prof. Loudon, seconded by Mr. Buchan, That it is desirable, in order to encourage the pursuit of special studies amongst the graduates in Arts in this University to establish the Degree of Ph.D.

Moved in amendment by Dr. Richardson, seconded by Dr. McFarlane, That the words "in Arts" be struck out.

The amendment was lost and the original motion carried.

Moved by Prof. Loudon, seconded by Mr. Buchan, and carried, That the resolution be referred to the Board of Arts Studies to prepare a scheme.

Moved by Mr. Falconbridge, seconded by Mr. Houston, and carried, That the rule requiring notice of motion be suspended in case of the following motion :

Moved by Mr. Falconbridge, seconded by Mr. Houston, and resolved :—

That in the opinion of the Senate, advantage should be taken of the resignations of the Lecturers in French and Italian in University College, to re-arrange the work of tuition in the Department of Modern Languages ; and that with a view to carrying out such a re-arrangement, the Senate do not consider it in the interests of the College that instructors in those subjects should be appointed until ample time and opportunity shall have been afforded to the Senate to discuss the matter and to make recommendations thereon, and that His Honour the Lieutenant-Governor in Council be prayed to defer action as to such proposed appointments.

Dr. Oldright gave notice that at the next meeting of the Senate, he would move that it is desirable that the subject of Spanish be restored to the curriculum.

Moved by Prof. Loudon, seconded by Mr. Buchan, and carried, That there shall be no Scholarships awarded except at the Examinations for Junior Matriculation and First Year.

On motion of Prof. Wright, seconded by Prof. Pike, the Statute amending the Natural Science course was read a first time.

The Senate adjourned to the call of the chair.

Confirmed

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, October 26th, 1883.

Present :—The Vice-Chancellor, (Mr. Mulock,) Dr. Wilson, Mr. Crickmore, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Dr. Larratt Smith, Prof. Wright, Prof. Pike, Prof. Loudon, Dr. Thorburn, Mr. King, Dr. McFarlane, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Gibson, Dr. Richardson, Rev. Principal Caven.

Mr. Houston gave notice that at the next meeting of the Senate, he would move that the Council of Univerity College be requested to furnish (1) An account of the receipts and expenditures in connection with the College Residence for the past five years ; (2) A statement of the number of students living in the residence during each of those five years ; (3) A statement of the total number of students in attendance on the College classes for each year ; and (4) A statement of the attendance this year, and the condition of the College as regards accomodation for both students and teachers.

On motion of Prof. Galbraith, seconded by Dr. Richardson, the statute relative to the Faculty of Civil Engineering was read a first time.

On the motion of the Vice-Chancellor, seconded by Dr. Wilson, the agreement relative to the Yonge Street Avenue, between the University and City of Toronto, was adopted.

On motion of Mr. Buchan, seconded by Prof. Loudon, the following resolution was adopted :—

That it is expedient that the texts which are to form subjects of examinations in the Curriculum of Arts, Law and Medicine, for the five years next following the year 1885, be prescribed and made public as soon as possible ; and that this resolution be referred to a joint Committee consisting of the several Boards of Studies, with instructions to prepare a scheme.

On motion of Dr. Wilson, seconded by Prof. Wright, the following resolution was adopted :—

That the Chancellor, Vice-Chancellor and the Hon. Mr. McMaster, be appointed to act along with two gentlemen to be named by the Council of University College, as a Committee to consider and report on a scheme for retiring allowances to Professors, Lecturers and Officers of University College, and Teachers of Upper Canada College.

On motion of Mr. Buchan, seconded by Mr. Houston, a statute proposing to allow Modern Languages to be substituted for Greek throughout the Pass Course of the Faculty of Arts, was read a first time.

Moved by Prof. Loudon, seconded by Dr. Richardson, that in the opinion of this Senate, the interests of the Department of Modern Languages demand that a Professorship of the Romance Languages be established in University College, and that the Government be advised to fix the salary at a sum not less than $2,000.

Moved in amendment by Prof. Wright, seconded by Prof. Pike, that the Senate recommend to His Honour the Lieutenant-Governor in Council, the establishment of a joint Lectureship in French and Italian in University College, in place of the separate Lectureship in these languages now vacant.

The amendment was lost on the following division :—

Yeas :—Profs. Wright and Pike, Drs. Wilson and Smith—4.

Nays :—Rev. Father Vincent, Drs. Oldright, Caven, Thorburn, McFarlane, Richardson, Profs. Galbraith, Loudon, Messrs. McMurchy, King, Crickmore, Gibson, Buchan, Falconbridge, Houston—15.

The original motion was carried on the same division.

Moved by Mr. Gibson, seconded by Mr. Crickmore, and carried, That a Committee be appointed consisting of the Vice-Chancellor, the President, Principal Caven, Mr. Falconbridge, Mr. Justice Patterson, Prof. Loudon, Dr. Oldright, and the mover and seconder, for the purpose of considering and reporting to the Senate such changes, if any, as may be thought advisable in the requirements for the Degree of LL.D.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

Minutes of a meeting of the Senate, held in the Senate Chamber, November 9th, 1883.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Dr. Larratt Smith, Prof. Wright, Prof. Pike, Prof. Loudon, Dr. Thorburn, Dr. Graham, Mr. Falconbridge, Prof. Galbraith, Mr. Houston, Rev. Principal Caven.

Dr. Wilson informed the Senate that Joseline Bagot, Esq., had presented to the University an engraved portrait of Sir Charles Bagot, G.C.B. ; also that Col. R. B. Denison had presented to the University, a copy of the original program of the ceremony of laying the foundation stone of King's College.

Moved by the Vice-Chancellor, seconded by Dr. Wilson, and carried, That the special thanks of the Senate of the University of Toronto, be conveyed to Joseline Bagot, Esq., for the gift of an engraved portrait of Sir Charles Bagot, G.C.B., Governor General of Canada, by whom the foundation stone of King's College was laid, on the 23rd of April, 1842, and which they receive as a memorial of an important event in the early history of the University.

Moved by the Vice-Chancellor, seconded by Dr. Wilson, and carried, That the thanks of the Senate be conveyed to Col. Robert B. Denison, for a copy of the original programme of the ceremony of laying the foundation stone of King's College, April 23rd, 1842.

The Registrar communicated to the Senate the appointment of Col. Gzowski and John Macdonald, Esq., by the Council of University College, to act with the gentlemen named by the Senate as a joint Committee to report a scheme for retiring allowances.

The Vice-Chancellor presented the report of the Committee on Upper Canada College, which was received.

On motion of Mr. Houston, seconded by Dr. Larratt Smith, Mr. Houston's statute proposing to remove the age limit for Scholarships at Junior Matriculation, was read a first time.

Moved by Mr. McMurchy, seconded by Mr. Falconbridge, and carried, That the Committee on change of texts in the Curriculum (Board of Arts Studies), be requested to present at an early day, a partial report on texts for Junior and Senior Matriculation for the years 1886-7.

Moved by Prof. Galbraith, seconded by Prof. Loudon, and carried, That the following Committee be appointed to consider and report upon the details of the proposed statutes, relative to the Degree of C.E., viz.: Vice-Chancellor, Dr. Wilson, Col. Gzowski, Dr. Oldright, Prof. Pike and the mover and seconder.

On motion of Mr. Houston, seconded by Dr. Fulton, the following resolution was adopted :—

That the Council of University College be requested to furnish the Senate (1) a copy of the answer made by the Council to the applications of certain female undergraduates of the University for permission to attend lectures; (2) a statement giving the names of such applicants, their University standing, and the year in which each applied for admission to University College.

Moved by Prof. Wright, seconded by Prof. Pike, and carried. That without committing itself to the scheme set forth in the statute introduced by the mover in regard to the Department of Natural Sciences, the Senate refer the whole to the Board of Arts Studies to report the same.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 30th, 1883.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Crickmore, Mr. Buchan. Rev. N. Wolverton, Rev. Father Vincent, Mr. McMurchy, Dr. Larratt Smith, Prof. Pike, Prof. Loudon, Mr. Falconbridge, Prof. Galbraith, Mr. Houston, Principal Caven, Hon. Wm. McMaster.

Letters were read from,—

1. Hon. T. W. Taylor, to the Vice-Chancellor, resigning his seat on the Senate.

2. Chairman of the Faculty of Woodstock College (formerly Canadian Literary Institute), informing the Senate of the appointment of the Rev. Principal Wolverton, B.A., as the representative of the College on the Senate, in the stead of Prof. J. E. Wells, M.A.

3. R. B. Nevitt, B.A., M.D., Registrar of the Women's Medical College, Toronto, asking for the affiliation of that College with the University.

The Vice-Chancellor presented the following report of the Committee on Upper Canada College, which was adopted on motion of the Vice-Chancellor, seconded by Dr. Larratt Smith :—

To the Senate, etc. :

GENTLEMEN.—Your Committee on Upper Canada College beg to recommend that the following action be taken with regard to the case of Mr. Wedd, First Classical Master, and that of Mr. Thompson, Second English Master, Upper Canada College :—

Mr. Wedd.—1. That he shall teach half time and receive therefor one thousand and twenty-five dollars per annum.

2. That he shall continue to occupy his house, undertaking in return therefor to teach out of College hours such promising pupils as may be sent to him by the Principal,

in order that their knowledge of Latin and Greek may be brought up to a level with that possessed by them of other subjects.

3. That he shall retain the title of First Classical Master.

4. That nothing in this arrangement shall be understood in any way to prejudice any claim on his part at any future time to a retiring allowance, based upon the salary received by him prior to this arrangement.

5. That this arrangement be considered as having taken effect from the first day of September, 1883.

Mr. Thompson.—1. That he retire from the position of Second English Master, Upper Canada College, on the 31st day of December next, to which date his salary shall be paid him.

2. That he be paid a retiring allowance of two thousand five hundred dollars.

3. That in consideration of his vacating the house at present occupied by him, on or before the 20th of November next, this retiring allowance shall be then paid to him.

4. That free tuition be granted to Mr. Thompson's sons.

All of which is respectfully submitted.

W. MULOCK,
Vice-Chancellor.

On motion of Prof. Loudon, seconded by Mr. Buchan, The following resolution was adopted :

That at the Examination for the Degree of B.A., Honour Candidates shall be arranged in three classes, the minima for which shall be 75, 66 and 50 per cent. respectively, and no medals shall be awarded at such Examinations.

Moved by Prof. Loudon, seconded by Mr. Buchan, and carried, That the above resolution, with those of which notice was given by Prof. Loudon on July 26th, 1882, and which were adopted May 29th, 1883, and October 20th, 1883, be referred to the Board of Art Studies.

On motion of Mr. Houston, seconded by Mr. Falconbridge, The following resolution was adopted :—

That it is expedient to create in the Arts Curriculum of the University a Department of Political Science, in which an undergraduate may, on the usual conditions, proceed to the Degree of Bachelor of Arts ; to include in this Department Constitutional History, Constitutional Law, Civil Polity, Political Economy and Jurisprudence; and to separate Civil Polity in the Third and Fourth Years from the Department of Mental and Moral Science.

On motion of Mr. Houston, seconded by Prof. Galbraith, Mr. Houston's statute, which proposes to allow an undergraduate who has degraded to compete for relative standing, etc., was read a first time.

Mr. Houston's motion for information as to the College residence was withdrawn.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move for the appointment of a Committee to obtain information respecting the residence attached to University College.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, December 14th, 1883.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Crickmore, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Prof. Pike, Prof. Loudon, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Gibson, Rev. Principal Caven, Rev. D. J. Macdonnell.

The letter of Dr. Nevitt, Registrar of the Women's Medical College, presented at last meeting of the Senate, was referred to the Board of Medical Studies.

On motion of Mr. Houston, seconded by Dr. Wilson, It was decided that the resolution of the Senate declaring it expedient to create a new Department of Political Science in the Arts Curriculum of the University, be referred to the Board of Arts and Legal Studies, with instructions to prepare a scheme for giving it effect.

Prof. Galbraith presented the following Report of the Committee on the Statute to create the Degree of C.E., which was ordered to be printed and distributed to members of the Senate :—

To the Senate, etc. :

GENTLEMEN,—Your Committee on the proposed Degree of C.E. beg to recommend the following statute to provide for it :—

By the Senate, etc. :

Be it enacted, I. That all previous Statutes of the University relating to Degrees or Diplomas in Civil Engineering be hereby repealed.

II. That the Degree of C.E. be hereby established, to be granted subject to the following conditions and regulations :—

1. Candidates for the said Degree shall hold the Diploma in Civil Engineering of the Ontario School of Practical Science.

2. Candidates shall have spent three years after receiving the said Diploma in the actual practice of the profession of Civil Engineering.

3. Candidates shall have spent at least two years of the said period in the construction and operation of engineering works, as distinguished from surveys merely.

4. Satisfactory evidence shall be offered as to the periods spent on the different classes of engineering employment, and intervals during which the Candidate was not engaged in the construction or operation of engineering works or prosecution of surveys shall not be included as portions of the aforesaid period of three years.

5. It shall not be necessary that the several intervals required to make up the period of three years be consecutive.

6. Each candidate shall prepare, for the approval of the Senate, an original essay on some engineering subject, accompanied with detailed explanations, drawing, specifications and estimates ; he shall also be examined on the subject of the essay, as well as on the work or works on which he has been engaged, unless exempted therefrom on the special recommendation of the examiners.

7. The subjects of the said essays shall be forwarded to the Registrar for the approval of the Senate, not later than the first day of February.

8. Candidates shall notify the Registrar of their intention of proceeding to the Degree of C.E., not later than the first day of April.

9. The aforesaid evidences respecting the duration of intervals of employment, together with the essays, drawings and estimates, shall be sent to the Registrar not later than the first day of May.

10. The examination of the essays, drawings and estimates, and any further examination of the candidate that may be considered necessary, may be held in May.

11. The fee for the Degree of C.E. shall be , and shall be paid to the Registrar not later than the first day of May.

12. The essays, drawings and estimates submitted by the candidates, shall be the property of the University.

On motion of Dr. Oldright, seconded by Prof. Galbraith, the following resolution was adopted :—

That, in the opinion of the Senate, it is desirable that Spanish should be made a sub-department of the Department of Modern Languages.

Prof. Galbraith gave notice that he would move the second reading of the Statute respecting the Degree of C.E. at the next meeting of the Senate.

Moved by Mr. Falconbridge, seconded by Mr. Houston, That the ordinary meetings of the Senate be open to members of Convocation and representatives of the press.

The debate on this motion was adjourned on motion of Prof. Loudon, seconded by Dr. Caven.

Moved by Mr. Falconbridge, seconded by Mr. Gibson, and carried, That William Alexander Foster, LL.B., be elected a member of the Senate in the room and stead of the Hon. Mr. Justice Taylor, resigned.

On motion of Mr. Buchan, seconded by Prof. Loudon, Mr. Buchan's statute proposing to substitute Modern Languages for Greek, was referred to the Board of Arts Studies.

On motion of Mr. Houston, seconded by Prof. Galbraith, the following Statute was read a second time and passed :—

By the Senate, etc. :

Be it enacted, That the regulation respecting Scholarships, contained in the fourth paragraph, page 32 of the Arts Curriculum of 1880, enacting that "at Junior Matriculations no Scholarship will be awarded to any candidate who, at the time of the commencement of the examination, is more than twenty-three years of age," be repealed.

On motion of Mr. Houston, seconded by Mr. Galbraith, the following Statute was read a second time and passed :—

By the Senate, etc. :

Be it enacted, That the regulations relating to the Honour Course in Arts be amended by omitting the paragraph on page 7 of the Arts Curriculum of 1880, beginning "no undergraduate in the Honour Course," and ending "or for other grave reasons"; and that the regulations relating to the Honour Course in Medicine be amended by omitting the same regulation on page 7 of the Medical Curriculum of 1881.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, January 4th, 1885.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Buchan, Prof. Wright, Prof. Loudon, Mr. Falconbridge, Mr. Foster, Mr. Houston, Dr. Richardson.

A letter was read from the Registrar of King and Queen's College of Physicians, Dublin, Ireland, informing the Senate that the University of Toronto had been placed on the list of Institutions recognized by that College as exempting graduates from the First Professional Examinations.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move that a committee be appointed to draft a memorial to the Government of Ontario, with a view to securing for the female undergraduates of the University of Toronto, tuition throughout the Arts Course of a quality equal to that of the tuition provided in University College, and at no greater cost to students.

Mr. Houston gave notice that at the next meeting of the Senate, he would move that it is expedient to make Chemistry and Biology optional at Junior Matriculation, and to take account of the marks obtained in these subjects in awarding Honours and Scholarships.

The Vice-Chancellor presented the following report of the Committee on the Degree of LL.D. :

To the Senate, etc. :—

GENTLEMEN,—Your Committee, appointed for the purpose of considering and reporting to the Senate, such changes, if any, as may be thought advisable in the requirements for the Degree of LL.D., have the honour to recommend that the Degree be conferred *honoris causa* only ; and that such legislation be sought as will enable the University so to award it.

All which is respectfully submitted.

W. MULOCK,
Vice-Chancellor.

Dr. Wilson gave notice that at the next meeting of the Senate, he would move the adoption of the report of the Committee on granting the Degree of LL.D., *honoris causa*.

Mr. Houston's notice of motion for a Committee to enquire into the affairs of the College Residence was withdrawn.

On motion of Mr. Houston, seconded by Prof. Loudon, Mr. Houston's Statute to admit male as well as female candidates to the Local Examinations, and to accept as having passed the Junior or Senior Matriculation Examination all candidates who at the Local Examination pass in all the subjects of Junior or Senior Matriculation respectively, was read a first time.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, February 1st, 1884.

Present :—The Vice-Chancellor, (Mr. Mulock,) The Minister of Education, (Hon. G. W. Ross,) Dr. Wilson, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Prof. Loudon, Dr. Thorburn, Dr. McFarlane, Mr. Foster, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. King, Rev. Principal Caven.

A communication was read from the Chancellor of the University of Edinburgh, inviting the Senate of the University of Toronto to send a representative to Edinburgh, on the occasion of the celebration of the ter-centenary of that University.

Dr. Wilson was requested to answer the invitation.

Moved by the Vice-Chancellor, seconded by Mr. King, and carried, That the Senate approves of the recommendations of the Committee of Management, as contained in the following Memorial of that Committee to the Senate; and that the Lieutenant-Governor in Council be respectfully requested to give effect thereto.

MEMORIAL.

The Committee of Management of the University of Toronto and University College beg to report to the Senate of the University of Toronto as follows:

That by Order in Council, dated the 16th day of May, 1878, said Committee was created, composed of the Vice-Chancellor, and two members elected by the Senate from their members, the President of University College and one member elected by the Council of University College, but not necessarily a member of such Council, with various powers and duties, amongst others the consideration from time to time, as to investments on account of Endowment Funds of the University and College, of the best disposition by sale, lease, or otherwise, of landed and or other property part of such endowment, and the best means of managing endowment and property generally, whilst the like powers and duties in regard to the management of the Endowment, Property and Income of Upper Canada College and Royal Grammar School, were by said Order in Council conferred on the Standing Committee on Upper Canada College appointed by the Senate;

That by a further Order in Council, dated the 29th day of September, 1880, the Chancellor of the University of Toronto was declared to be an *ex-officio* member of the said Committee of Management;

That by a further Order in Council, dated the 25th of November, 1880, the Senate was authorized to appoint an additional member of Council during the temporary vacancy then existing by reason of the illness of the late Vice-Chancellor of the University;

That by a further Order in Council, dated the 15th of July, 1881, the Senate was authorized to elect two members to the said Committee in addition to the two mentioned in the original Order in Council of 16th May, 1878;

In the opinion of this Committee it is advisable that the powers and duties respecting the management of the Endowment, property, and Income of Upper Canada College and Royal Grammar School should be vested in this Committee;

That all mortgage securities for moneys belonging to the respective Endowments of the University of Toronto, University College, and Upper Canada College, should require payment of such moneys into some chartered Bank in Ontario, to the credit of the respective accounts of said Institutions;

That the Committee of Management shall consist of the Chancellor and Vice-Chancellor of the University of Toronto, and the President of University College, *ex-officio*, and seven other members to be elected, five by the Senate of the University of Toronto, and not necessarily from that body, and two by the Council of University College, not of that body and approved by the Lieutenant-Governor in Council;

The Vice-Chancellor shall be Chairman of the said Committee of Management and five members shall constitute a quorum;

That the said Committee shall be entitled from time to time to invest the Endowment Funds on capital and other accounts, having regard to the following general regulations:—

1. Application for such loan shall be according to a printed form stating such particulars as the Board may deem essential.

2. The lands upon which loans may be effected shall be confined to improved freehold farm property in the Province of Ontario, first-class freehold property in the city of Toronto, and municipal debentures.

3. The amount to be loaned on mortgage shall not exceed sixty per cent. of what in the opinion of the Board is the actual selling value in cash of the property offered in security.

4. The title of the Bursar as mortgagee in each case, shall be certified by the Solicitor of the University, to the effect upon payment of the proposed advance of money; the title of the Bursar will be that of first mortgage in fee simple free from all encumbrances.

5. The amount of any loan shall not be less than $400, nor more than $10,000, unless specially authorized by Order in Council.

6. The rate of interest shall be the highest rate obtainable on each loan.

7. Any mortgage security to be taken or heretofore taken in which any part of the said endowments may be invested, may be discharged or assigned by the Bursar under his seal of office, countersigned by the Minister of Education from time to time, as the principal money thereof is fully paid and discharged and certified to by the report of the said Board.

8. The said Board shall be entitled to call in and direct the institution and maintenance of all proceedings for the recovery of overdue moneys.

The Committee would further recommend that the title "Committee of Management," given to this Committee by the said Order in Council, dated the 16th of May, 1878, be changed to that of "Board of Trustees," and that the Senate be respectfully requested to consider the foregoing recommendations and to submit the same with their opinions thereon to the consideration of His Honour, the Lieutenant-Governor in Council.

On motion of Mr. Houston, seconded by Dr. McFarlane, Mr. Houston's Statute to extend the Local Examinations, read a first time January 4th, 1884, was referred to the Board of Arts Studies.

On motion of Dr. Wilson, seconded by Prof. Loudon, The Report of the Committee on the degree of LL.D., presented January 4th, 1884, was adopted.

On motion of Prof. Galbraith, seconded by Prof. Loudon, the Statute creating the Degree of C.E., was read a second time and passed.

On motion of Prof. Loudon, seconded by Rev. Principal Caven, the following resolution was adopted:—

That the Senate deems it to be its duty again to approach the Lieutenant-Governor in Council with a view to lay before His Honour the wants of the University of Toronto and University College;

That a general statement of these wants was made in a report of a Committee of this Senate, presented January 13th, 1882, adopted January 20th, 1882, and transmitted to the Minister of Education May 17th, 1882;

That the Senate adheres to the view that the plan of reorganization set forth in that Report is, subject to possible modifications in minor details, the best that it can devise;

That the plan involves, as appears by the report, a considerable increase in the yearly expenditure, and the Senate very respectfully requests that the Lieutenant-Governor in Council would be pleased to take steps to increase the resources of the Institution, with a view to effect the needed improvements.

On motion of Rev. Father Vincent, seconded by Dr. Thorburn, the following resolution was adopted :—

That the foregoing resolution be transmitted to the Lieutenant-Governor in Council, together with the first part of the Finance Report of January 20th, 1882, as far as the words "reorganization to be effected," and the financial statements corresponding to "A" and "B" in the same report, for the current year.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in Senate Chamber, May 9th, 1884.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Dr. Ogden, Rev. Father Vincent, Mr. McMurchy, Mr. King, Dr. McFarlane, Mr. Falconbridge, Mr. Houston, Prof. Loudon, Mr. Kingsford, Mr. McMaster, Mr. O'Sullivan.

A letter was read from the Provincial Secretary, enclosing a copy of an Order in Council, appointing Casimir Stanislaus Gzowski, C.E., John Macdonald, Esq., and Dennis Ambrose O'Sullivan, members of the Senate for the three years ending May 16th, 1886.

The Vice-Chancellor presented the following report of the scrutineers at the late election of members of the Senate :—

To the Senate, etc. :

GENTLEMEN,—The undersigned scrutineers appointed to act at the counting of votes cast during the election of members of the Senate for 1884, have the honour to report as follows :—

To represent Convocation in the Senate, James Loudon, M.A., James Henry Coyne, B.A., and Rupert Etherege Kingsford, M.A., LL.B., were elected, the vote standing :

Prof. Loudon	507	Dr. Thornburn	297
Mr. Coyne	373	Mr. W. B. McMurrich	221
Mr. Kingsford	322	Mr. M. M. Crombie	64

To represent the legally qualified High School Teachers on the Senate, John Millar, B.A., was elected, the vote standing :

John Millar, B.A.	77	W. H. Ballard, M.A.	1
J. W. Conner, B.A.	71	D. C. McHenry, M.A.	1
H. B. Spotton	37	D. S. Patterson, B.A.	1
J. Seath, B.A.	3	Alex. Murray	1
J. E. Bryant, M.A.	1		

All of which is respectfully submitted.

W. T. BOYD,
W. FITZGERALD, } Scrutineers.

W. MULOCK,
Vice-Chancellor.

A letter from the Secretary to the Governor-General was read, informing the Senate of the intention of His Excellency (Lord Lansdowne), to present to the University, the Medals heretofore awarded by his predecessor.

The Vice-Chancellor gave notice that, at the next meeting of the Senate, he would introduce a statute to permit undergraduates in Medicine in certain cases, to take two Examinations together.

Mr. Houston gave notice that, at the next meeting of the Senate, he would introduce a statute amending the regulation respecting Scholarships on page 32 of the Arts Curriculum, so as to place male scholars on the same footing as females scholars, with respect to attendance at lectures.

The Vice-Chancellor presented the Report of the Board of Studies, prescribing the work for Junior and Senior Matriculation from 1886 to 1890 inclusive. On motion of Dr. Wilson, seconded by Mr. Houston, it was ordered to be printed and distributed to the members of the Senate.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The following were appointed a Committee to strike Standing Committees for the year:—The Chancellor, Vice-Chancellor, Mr. Crickmore, Prof. Loudon, Dr. McFarlane, and Mr. Houston.

By permission of the Senate, Mr. Houston withdrew his notice of motion as to the tuition of female undergraduates, which notice of motion was given January 4th, 1884.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, June 5th, 1884.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. Buchan, Dr. Ogden, Rev. Father Vincent, Mr. McMurchy, Mr. Millar, Dr. Larratt Smith, Mr. King, Mr. Falconbridge, Mr. Foster, Mr. Galbraith, Mr. Houston, Mr. Gibson, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Rev. Principal Caven, Mr. O'Sullivan.

A letter was read from the Secretary of the Law Society of Upper Canada, informing the Senate of the appointment of Mr. Charles Moss, Q.C., as the representative of the Law Society on the Senate.

Prof. Loudon presented the following Report of the Committee on the Moss Scholarship:—

To the Senate, etc:

GENTLEMEN,—The Committee appointed to carry out the scheme for the establishment of a Scholarship as a Memorial of the late Vice-Chancellor, Hon. Chief Justice Moss, beg respectfully to report:—

1. That the amount subscribed, as shewn by the appended list, is $2,065, of which the sum of $1,100 has been paid to the Bursar. To this sum is to be added the accrued interest, amounting at the end of 1883 to about $150, and such additional subscriptions as may hereafter be received.

The Bursar has been instructed to call in the unpaid subscriptions immediately, so that the Senate may now be justified in proceeding to establish the Scholarship in question.

All of which is respectfully submitted.

J. LOUDON,
June 5th, 1884. Convener.

On motion of the Vice-Chancellor, seconded by Mr. Houston, The Vice Chancellor's statute, which proposes to allow, under certain circumstances, two Examinations in Medicine to be taken together, was read a first time.

Mr. King gave notice that, at the next meeting of the Senate, he would move for the appointment of a committee to consolidate the Statutes of the University.

Mr. Houston gave notice that, at the next meeting of the Senate, he would introduce a statute providing for the introduction of certain branches of Natural Sciences as optional subjects at Junior Matriculation.

The Vice-Chancellor gave notice that, at the next meeting of the Senate, he would move the appointment of five persons as members of the Board of Trustees.

In the absence of Dr. McFarlane, Prof. Loudon moved, seconded by Mr. McMurchy,

That a committee, consisting of the members of the Board of Medical Studies, and Drs. Ogden and McFarlane, be appointed to consider and report upon the proposed amendments to the Medical Curriculum.—*Carried.*

In the absence of Dr. McFarlane, Prof. Loudon gave notice that, at the next meeting of the Senate, he would move for the appointment of a committee to confer with the Medical Council with regard to a Common Matriculation in Medicine.

Mr. Gibson gave notice that, at the next meeting of the Senate, he would move for leave to introduce a statute respecting the Degree of LL.D.

The Senate adjourned to Friday, June 6th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

The Minutes of a meeting of the Senate held in the Senate Chamber, June 6th, 1884.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. Buchan, Dr. Fulton, Rev. Father Vincent, Mr. McMurchy, Mr. Miller, Dr. Larratt Smith, Mr. King, Mr. Foster, Prof. Galbraith, Mr. Houston, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Judge Patterson, Mr. McMaster, Mr. O'Sullivan.

Moved by Prof. Loudon, seconded by Mr. McMurchy, and carried, That the Vice-Chancellor, and Drs. Oldright, Fulton, and McFarlane, together with the mover and seconder, be a committee to confer with the Medical Council for the purpose of arranging, if possible, a Common Matriculation in Medicine.

Moved by the Vice-Chancellor, seconded by Dr. Wilson, and carried, That Mr. Justice Patterson, Col. Gzowski, Mr. McMaster, Dr. Larratt Smith and Chief Justice Cameron, be the representatives of the Senate on the Board of Trustees.

Moved by Mr. King, seconded by Mr. O'Sullivan, and carried, That the following be a committee for the purpose of consolidating the University Statutes, viz.:—Messrs. Falconbridge, Houston, Kingsford, Dr. Oldright, and the mover and seconder of this motion, Mr. Kingsford to be the convener of the Committee, who are instructed to report at the next business meeting of the Senate.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The following Statute was read a second time and passed:—

By the Senate, etc.:

Be it enacted, That in the Faculty of Medicine the Senate may allow a candidate to take two Professional Examinations at the same time.

That this Statute shall be held to have come into effect at the Examinations held in the month of April, 1884.

Moved by Mr. O'Sullivan, seconded by Mr. Kingsford, and carried, That E. Burke be granted his Degree of M.B., and be allowed to obtain the same by proxy on filing a properly executed power of attorney with the Registrar.

The Senate adjourned to Tuesday, June, 10th, at 2 o'clock, afterwards to adjourn to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

Minutes of a meeting of the Senate, held in the Senate Chamber, June 10th, 1884.

After meeting in the Senate Chamber, the Senate proceeded to the Convocation Hall, where degrees were conferred and other proceedings had as appears of record in the book of Convocation.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, July 22nd, 1884.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. McMurchy, Mr. Falconbridge, Mr. Houston, Prof. Loudon, Mr. McMaster, Mr. O'Sullivan.

Prof. Loudon gave notice of moving, at the next meeting of the Senate, that the Curriculum in Arts be amended by providing that the First Year's Examination be the only Examination for Senior Matriculation.

Prof. Loudon gave notice of moving, at the next meeting of the Senate, that additional Scholarships be awarded in Classics, Mathematics and General Proficiency, at the Examination for Junior Matriculation, out of the money hitherto appropriated for Scholarships at Senior Matriculation.

Mr. O'Sullivan gave notice that, at the next meeting of the Senate, he will move for such amendments of the Statutes in force regarding *aegrotat* standing as in the opinion of the Senate may be desirable.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, October 3rd, 1884.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Rev. Father Vincent, Mr. King, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Mr. Houston, Prof. Loudon, Mr. O'Sullivan.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move move that certain branches of Natural Science be added to the subjects for Junior Matriculation as optional subjects;

Also, that, at the next meeting of the Senate, he would move that Canadian History be added to the subjects of Junior Matriculation.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 14th, 1884.

Present :—The Vice-Chancellor (Mr. Mulock), Mr. Moss, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Mr. Millar, Prof. Wright, Dr. McFarlane, Mr. Falconbridge, Prof. Galbraith, Mr. Houston, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Rev. Principal Caven, Mr. O'Sullivan.

A petition was presented, signed by N. Kent and 266 other undergraduates, praying that ground for the erection of a building for moral and religious purposes be granted them in the immediate neighbourhood of the University.

Mr. Kingsford presented the following report of the Committee appointed to consolidate the statutes, which was received :—

To the Senate etc :

GENTLEMEN.—Your Committee beg leave to report that their first object after their appointment was to place in the hands of members of the Senate a complete collection of the statutes passed since 1871. This object they succeeded in effecting, and all the statutes since the last revision have been furnished to the members of the Senate.

The next step was to collect the old and new statutes with the view of preparing a draft. This has also been done, and the various statutes relating to cognate subjects have been collected and arranged. A full table of these statutes has also been prepared. The general scheme of the arrangement is as follows :—

1. Statutes relating to the Senate, its proceedings, officers, etc.
2. Statutes relating to Examinations, etc., in course.
3. Statutes relating to degrees.
4. Occasional statutes.
5. Statutes relating to Upper Canada College.

On considering the draft your Committee have decided to recommend that the statutes relating to particular branches be distributed for consolidation to those most familiar with those branches.

The Committee propose to retain those under the 1st and 4th divisions.

Those under the 2nd and 3rd divisions it is proposed to hand over to the Board of Arts Studies and other Boards of Studies, according to the nature of the subject.

The 5th division should be put into shape by Upper Canada College Committee.

Members having statutes which they wish introduced, on any subject amending the present statutes, are requested to bring in such amendments at their earliest convenience so that if adopted they can be incorporated in this revision.

After the various portions have been thus prepared it is proposed that they shall be sent back to the Committee, who will be responsible for the final draft. Thus uniformity of style and arrangement will be secured.

All of which is respectfully submitted.

R. E. KINGSFORD,
Convener of Committee.

November 14th, 1884.

Mr. Coyne gave notice that, at the next meeting of the Senate, he would move that the petition of certain undergraduates asking for liberty to erect a building upon grounds belonging to the University for the purposes of the petition mentioned, be taken into consideration with a view to the same being approved of by the Senate.

Prof. Loudon renewed his notices of motion with regard (1) to holding the Senior Matriculation in May, and (2) the institution of additional Scholarships at Junior Matriculation.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move—

1. That Ancient History, as defined in the curriculum for Pass in the Second Year, be inserted in the curriculum for Pass at Senior Matriculation, and that the following be inserted in the curriculum for Pass at Senior Matriculation :—

HISTORY.

History of England to the accession of Henry VII.

History of Canada and Acadia from the Treaty of Paris (1763) to the British North America Act (1867) inclusive.

2. That one book of Milton's Paradise Lost, be inserted for each of the years 1886-90, along with one of Shakespeare's Plays for the Pass Examination for Senior Matriculation.

3. That one or more of Spenser's minor poems be inserted for each of the years 1886-90, in the work for the Honour Examination in English and Senior Matriculation, instead of one book of Paradise Lost.

4. That a prose work to be used as a basis for exercises in English Composition, be inserted for each of the years 1886-90, in the English of the curriculum for pass at the Senior Matriculation.

Moved by Prof. Galbraith, seconded by Prof. Loudon, and carried, That the consideration of special instructions to the Examiner in Civil Engineering be referred to the Board of Arts Studies.

Moved by Prof. Loudon, seconded by Prof. Galbraith, and carried, That a Committee consisting of the Vice-Chancellor, Dr. Wilson, Rev. Principal Caven, Rev. Father

Vincent, Principal Wolverton, and Mr. Moss, together with the mover and seconder, be appointed to arrange the details of a scheme for conducting the University and College Examinations for the Degree of B.A., in accordance with the resolutions already passed with reference to the reduction of the number of Examinations in the Arts Course.

Moved by Prof. Galbraith, seconded by Prof. Loudon, and resolved, That the Registrar be instructed to communicate to Prof. T. W. Wright, a graduate of this University, the thanks of this Senate for the gift of his "Treatise on the Adjustment of Observations," to express its high sense of the importance of this work as a contribution to science; and to convey to him its good wishes for his future success.

Moved by Mr. Kingsford, seconded by Mr. O'Sullivan, and carried, That the names of the Executive Committee of Convocation be published in the official papers of the University.

The Senate adjourned to Thursday, November 20th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 20th, 1884.

Present:—The Vice-Chancellor, (Mr. Mulock,) The Minister of Education, (Hon. G. W. Ross,) Dr. Wilson, Mr. Moss, Rev. Father Vincent, Mr. McMurchy, Prof. Wright, Mr. King, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Dr. Oldright, Mr. Houston, Dr. Richardson, Prof. Loudon, Mr. Kingsford, Rev. Principal Caven.

Moved by Mr. Kingsford, seconded by Mr. Falconbridge, and carried, That the principle of division recommended by the report of the Committee on the revision of the Statutes be adopted, by transferring the Statutes relating to Examinations, etc., in course, and to Degrees to the Legal, Medical and Arts Boards of Studies respectfully, and those relating to Upper Canada College, to the Upper Canada College Committee; and that the Revision Committee distribute such Statutes accordingly; and that the Boards of Studies do hand in to the Revision Committee their draft Statutes when completed.

Moved by Prof. Loudon, seconded by Mr. Houston, and carried, That the Examiners for Senior Matriculation be held at the same time and on the same papers as the Examinations for the First Year.

On motion of Mr. McMurchy, seconded by Mr. Houston, The following Statute was read a first time and referred to the Board of Arts Studies:—

By the Senate, etc.:

Be it enacted, That Annual Pass Junior Matriculation Examinations in the Faculty of Arts may be held at places outside of Toronto, at the request of duly communicated to the Registrar at least one month before the commencement of said Junior Matriculation Examinations, provided there be at least ten (10) candidates to be examined there on the said Junior Matriculation work.

Proper accommodation for holding such Examinations shall be provided by the mayor or reeve of such city, town or village, including stationery of precisely the same kind as that used at the Examinations in Toronto.

Provisions as to supervision of Examination and Transmission of papers to be as in Statute CX.

Moved by Dr. Wilson, seconded by Mr. Foster, and carried, That the Senate approve of the appropriation of a site on the University grounds for the erection of a building for the use of the University College Young Men's Christian Association; and they recommend this to the favourable consideration of the Board of Trustees of the University.

On motion of Prof. Loudon, seconded by Mr. McMurchy, the following motion was adopted, and with the same moving and seconding, referred to Board of Arts Studies:—

That the moneys hitherto appropriated for Scholarships at Senior Matriculation be henceforth devoted to the establishment of additional Scholarships at the Examination for Junior Matriculation.

Mr. Houston gave notice that at next meeting of the Senate, he would move that Ancient History, as defined in the present curriculum for the Second Year, be made an optional subject for Pass in the First Year.

Moved by Mr. Houston, That the Scholarships and Medals at present given in the Faculties of Law and Medicine be abolished with the exception of the Starr Medals in Medicine.

No one seconding this motion, it was lost.

The Senate adjourned to Friday, November 28th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 28th, 1884.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Dr. McFarlane, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Gibson, Prof. Loudon, Rev. Principal Caven, Mr. McMaster.

Mr. Buchan, for Mr. Millar, gave notice that at the next meeting of the Senate, he would move that the statutes regarding the Local Examinations be amended so as to include boys as well as girls, and that candidates for Matriculation, including those who may be candidates for Honours, shall have the privilege of writing at the Examinations instead of coming to Toronto.

Moved by Dr. Oldright, seconded by Dr. McFarlane, and carried, That the Board of Legal Studies be requested to examine into the literary requirements of the curriculum of the Law Society of Upper Canada, and of the curriculum of the Faculty of Medicine in this University, and to report whether the latter should not be placed in the same position as the former, so far as regards entrance into the Faculty of Law.

On motion of Mr. Buchan, seconded by Prof. Loudon, the following statute was read a second time and passed :—

By the Senate, etc.:

Be it enacted, That candidates for a Pass Degree in Arts, may substitute French and German for Greek throughout their course. They will be required to take in each year the work prescribed for Pass in French and German, and, in addition, to take either the Honour French or Honour German of the second year. In this subject, however, it will not be necessary for them to attain an Honour standing.

Mr. Houston's motions as to English and History were discharged.

Mr. Houston's motion as to Ancient History in the second year was discharged.

Mr. Houston gave notice that, at the next meeting of the Senate, he would introduce a statute providing for the omission from the third regulation respecting Scholarships, on page 9 of the Medical Curriculum, of the following words : "And that he is not an undergratuate or graduate in the Faculty of Medicine of any other Universtty," and also for the omission of the whole of the last regulation on page 10 respecting Scholarships.

The Senate adjourned to Friday, December 5th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, December 5th, 1884.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. Buchan, Rev. Father Vincent, Mr. McMurchy, Mr. Millar, Dr. Larratt Smith, Prof. Wright, Prof. Galbraith, Dr. Oldright, Mr. Houston, Prof. Loudon, Mr. Kingsford, Rev. Principal Caven, Mr. McMaster, Mr. O'Sullivan.

On motion of Dr. Wilson, seconded by Rev. Principal Caven, Mr. Mulock was unanimously re-elected Vice-Chancellor, for two years succeeding December 31st inst.

On motion of the Vice-Chancellor, seconded by Mr. O'Sullivan, the following statute was read a first time and referred to a Committee composed of the Board of Arts Studies, Dr. Caven, Rev Father Vincent, Mr. Moss, Mr. Wolverton, Mr. McMurchy, Mr. Kingsford, Mr. Macdonnell and Mr. McMaster :—

By the Senate, etc.:

Be it enacted, That candidates in the Third and Fourth Years may, in lieu of two of the subjects prescribed for each of those years, take two of the following subjects, namely : New Testament, Greek, Biblical Literature, Apologetics, Ethics, Didactics and Church History, the examinations in such substituted subjects being conducted and certified to by an affiliated College, other than University College.

On motion of Mr. Millar, seconded by Mr. Houston, the following motion was referred to the Board of Arts Studies, with the addition of Mr. McMurchy and Mr. Millar, That the statutes regarding the Local Examinanions be amended, so as to include boys as well as girls, and that candidates for Matriculation, including those who may be candidates for Honours, shall have the privilege of writing at these Examinations instead of coming to Toronto.

Mr. Kingsford gave notice that, at the next meeting of the Senate, he would move that the Senate recommend that there be allowed to the 'Varsity, for the publication of the reports of the meetings of the Senate, the sum of fifty dollars.

Mr. Millar gave notice that, at the next meeting of the Senate, he would move that its ordinary proceedings be open to representatives of the press.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, January 9th, 1885.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. Buchan, Mr. Wolverton, Rev. Father Vincent, Mr. McMurchy, Mr. Millar, Prof. Wright, Mr. King, Dr. McFarlane, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Gibson, Prof. Loudon, Mr. Coyne, Rev. Principal Caven, Mr. McMaster, Mr. O'Sullivan.

The following report on examinations in the Second and Third Years was presented by Prof. Loudon, and adopted on motion of Prof. Loudon, seconded by Dr. Wilson :—

To the Senate, etc.:

GENTLEMEN,—Your Committee appointed to consider a mode of conducting examinations for the Degree of B.A., beg to make the following recommendations :—

1. There shall be five Annual Examinations for the Degree of B.A., viz.: The Examinations for Junior Matriculation, First Year or Senior Matriculation, Second Year, Third Year, and Fourth Year or B.A.

2. All Examinations shall be conducted under the same regulations as hitherto, except as hereinafter provided.

3. In the case of Students of affiliated Colleges, the Second and Third Years Examinations shall be conducted by their respective Professors, Lecturers or Tutors, conjointly with associate Examiners appointed by the Senate, and such Examinations shall be held at the same time as the First and Fourth Years' Examinations.

4. Students attending lectures partly at University College, and partly at another affiliated College, shall be examined on the subjects of such lectures by the Professors Lecturers, or Tutors, whose lectures are so attended conjointly with the University associate Examiners.

5. Students who have obtained special exemption from attending lectures in the Second or Third Years, shall be examined as if they were students of University College, except in such cases as the Senate may, on application, otherwise direct.

6. Reports on all examinations shall be settled at a combined meeting of Examiners, presided over by the Vice-Chancellor or such Chairman as the Senate may, in his absence, appoint, and such report shall be submitted to the Senate for approval.

7. Examiners shall transmit their returns to the Registrar before such combined meeting.

8. Each candidate shall, at least three weeks before the time fixed for the commencement of the Annual Examinations, send to the Registrar of the University an application for Examination according to a printed form to be obtained from the Registrar, and such application shall be accompanied by a fee of $5.00.

9. The statute embodying these changes shall come into force and take effect on, from and after October 1st, 1885.

All which is respectfully submitted.

W. MULOCK,

January 8th, 1885. Vice-Chancellor.

The Statute giving effect to the preceding Report was read a first time, on motion of Prof. Loudon, seconded by Dr. Wilson.

Mr. Houston's notice to introduce a statute making certain changes in the Medical Curriculum was withdrawn.

Mr. Gibson's statute, respecting the Degree of LL.D., received its first reading, on motion of Mr. Gibson, seconded by Mr. King.

Mr. Kingsford's motion respecting reports of Senate meetings in the 'Varsity was dropped.

Mr. Millar's motion respecting the admission of representatives of the press to meetings of the Senate was withdrawn.

On motion of Dr. Wilson, seconded by Dr. Caven, the following resolution was adopted :—

That the Senate, at this its first meeting since the death of Mr. James Bethune, LL.B., Barrister, a member of this Senate and a distinguished graduate of this University, avail themselves of the opportunity to record their profound regret at the early death of one whose career at the Bar has been attended with such eminent success, and whose public services and the amiable and genial courtesy which distinguished him in private life, alike commend him to the favour of all who knew him.

The Senate desire to convey to the widow and family of the deceased member their heartfelt sympathy at their irreparable loss.

Mr. King gave notice of motion to fill the vacancy in the Senate created by the death of the late lamented James Bethune, LL.B.

The Vice-Chancellor laid before the Senate the proposed scheme for the formation of a Confederation of Colleges in Toronto as follows :—

1. It is proposed to form a Confederation of Colleges, carrying on, in Toronto, work embraced in the Arts Curriculum of the Provincial University, and in connection therewith the following institutions, namely : Queen's University, Victoria University and Trinity University, Knox College, St. Michael's College, Wycliffe College, and Toronto Baptist College, shall have the right to enter into the proposed confederation, provided always that each of such institutions shall, so long as it remains in the confederation, keep in abeyance any powers it may possess of conferring degrees other than degrees in Divinity ; such powers remaining intact, though not exercised. It shall be lawful for the Senate, from time to time, to provide by statute for the admission of other institutions into the confederation under the limitations above prescribed. Nothing herein contained shall be held to repeal any of the provisions for affiliation of institutions as contained in R. S. O., cap. 210, sec. 61.

2. The head of each confederating college shall be *ex officio* a member of the Senate of the Provincial University, and in addition thereto the governing body of each con-

federating college shall be entitled to appoint one other member of the Senate. The University Professoriate shall be represented by two of their members on the Senate, and the Council of University College by one of its members, in addition to the President.

3. The undergraduates of any confederating university shall be admitted *ad eundem statum*, and the graduates in Law and Arts of any confederating university shall be admitted *ad eundem gradum* in the Provincial University. Such of the graduates in Medicine of any confederating university as shall have actually passed their examinations within the limits of the Province of Ontario shall be admitted *ad eundem gradum* in the Provincial University.

4. During the continuance of such confederation, but no longer, all graduates in Medicine and Law so admitted shall have the same rights, powers and privileges as are at present enjoyed by the like graduates of the Provincial University, except as herein otherwise provided.

5. All graduates in Medicine, including such admitted graduates, shall vote as one body, and be entitled to elect four members of the Senate. All graduates in Law, including such admitted graduates, shall vote as one body, and be entitled to elect two members of the Senate.

6. The graduates in Arts of the several universities entering into the confederation shall, for the period of six years after the requisite legislation shall have been obtained, be entitled to the following representation on the Senate, namely: those of Queen's University to elect four members; those of Victoria University to elect four members; and those of Trinity University to elect four members. The graduates in Arts of Provincial University, other than those admitted *ad eundem gradum* under this scheme, shall be entitled to elect twelve members of Senate. After the said period of six years, separate representation shall cease, and the entire body of graduates shall unite in electing a number of representatives equal to those previously elected by the several universities in confederation.

7. (*a*) University College shall afford to all students, who desire to avail themselves thereof, the requisite facilities for obtaining adequate instruction in the following subjects in the curriculum of the Provincial University, viz.: Latin, Greek, Ancient History, French, German, English, Oriental Languages, and Moral Philosophy, provided that it shall be competent to the governing body of University College to institute additional chairs which do not exist in the University.

(*b*) Attendance on instruction provided in any of the confederating colleges, including University College, shall be accorded equal value as a condition of proceeding to any degree with attendance on the work of the University Professoriate.

8. There shall be established another teaching faculty in connection with the Provincial University, to be called the University Professoriate, which shall afford to all students of the Provincial University who desire to avail themselves thereof, the requisite facilities for obtaining adequate instruction in the following subjects, in accordance with the curriculum of such University, namely: Pure Mathematics, Physics, Astronomy, Geology, Mineralogy, Chemistry, Zoology, Botany, Physiology, Ethnology, (including Comparative Philology), History, Logic, and Metaphysics, History of Philosophy, Italian and Spanish, Political Economy and Civil Polity, Jurisprudence, Constitutional Law, Engineering, and such other Sciences, Arts, and branches of knowledge as the Senate of the Provincial University may from time to time determine, except such subjects as are prohibited from being taught by Revised Statutes of Ontario, cap. 209, sec. 9.

9. The Professors in such University Faculty shall be a corporation presided over by a chairman. The same person shall be President of University College and chairman of the Faculty of the University Professoriate. University College and the Faculty of the University Professoriate shall be complementary the one to the other, and afford to all University students the requisite facilities for obtaining adequate instruction in all subjects prescribed in the curriculum of the Provincial University. If in the interests of the general objects of the confederation, it shall be found advantageous to have any subject transferred from University College to the University, or from the University to Univer-

sity College, it shall be competent to the governing bodies of the College and University to arrange for such transfer.

10. Every graduate's or student's diploma or certificate of standing, issued by the Provincial University, in addition to being signed by the proper University authorities in that behalf, shall indicate the college or colleges in which such student attended lectures, and shall be signed by such professors, teachers and officers of such college or colleges, as its or their governing body or bodies may from time to time determine.

11. With a view to the advantageous working out of this scheme, representatives of the various colleges and the University Faculty, shall from time to time meet in Committee and arrange time-tables for lectures and other College and University work.

12. The Senate of the Provincial University may, of its own motion, enquire into the conduct, teaching and efficiency of any professor or teacher in the University Faculty, and report to the Lieutenant-Governor the result of such enquiry, and may make such recommendations as the Senate may think the circumstances of the case require.

13. All students, except in cases specially provided for by the Senate, shall enroll themselves in one of the colleges and place themselves under its discipline. The authority of the several colleges over their students shall remain intact. The University Professoriate shall have entire responsibility of discipline in regard to students, if any, enrolled in the University alone; in regard to students entering in one or other of the colleges its powers of discipline shall be limited to the conduct of students in relation to University work and duties. All other matters of discipline affecting the University standing of students shall be dealt with by the Senate of the Provincial University.

14. The University Endowment and all additions thereto shall be applied to the maintenance of the Provincial University, the University Faculty and University College.

15. There shall be the following staff in University College:—

One Professor of Greek,
" " Latin,
" " French,
" " German,
" " English,
" " Oriental Languages,
" " Moral Philosophy,
One Lecturer in Ancient History,
One Tutor in Greek,
" " Latin,
One Tutor in French,
" " German,
" " Oriental Languages,
" " English,
One Fellow in Greek,
" " Latin,
" " French,
" " German,
" " English.

Additional assistance in above subjects to be provided so that no Honour Class shall exceed twelve, or Pass Class thirty.

16. There shall be a University Professoriate adequate to give instruction in each of the following subjects, namely: Pure Mathematics, Physics, Astronomy, Geology, Mineralogy, Chemistry, Applied Chemistry, Zoology, Botany, Ethnology, History, Italian and Spanish, Logic and Metaphysics, History and Philosophy, Political Economy and Civil Polity, Constitutional Law, Jurisprudence, Engineering. As regards Tutors and Fellows, assistance shall be provided to the University Faculty similar to that mentioned above for the College, as may be required.

17. The University Professoriate lectures shall be free of charge to all students matriculated in the University, who are members of a confederating college, but in the case of students (if any) who do not belong to any college, the Senate shall determine the fees which shall be charged for the several courses of lectures in the University. But such Laboratory fees, as may be fixed from time to time by the Senate, shall be paid by all students.

18. The various colleges which are at present affiliated to any of the universities entering into the confederation, shall have the right to be affiliated to the Provincial University.

19. The curriculum in Arts of the Provincial University shall include the subjects of Biblical Greek, Biblical Literature, Christian Ethics, Apologetics or the Evidences of

Natural and Revealed Religion, and Church History, but provision shall be made by a system of options to prevent such subjects being made compulsory by the University upon any candidate for a Degree.

20. No college student shall be allowed to present himself for any University examination subsequent to matriculation with producing a certificate, under the hand and seal of his college, that he has complied with all the requirements of his college affecting his admission to such an examination.

21. The University College work shall continue to be carried on as at present, in the College buildings, and the University work shall be carried on in the same buildings in the School of Practical Science, and in such other buildings as may hereafter be erected on the present University grounds, in the City of Toronto.

A building suitable for a University Examination Hall, Senate rooms, Registrar's and other offices shall be erected on said grounds.

Additions to be made to the School of Science sufficient to afford proper accommodation for students in Mineralogy, Botany, and other subjects, and for the accommodation of the Museum, which should be removed from its present quarters in order to be more serviceable for Science students.

22. The following also to be considered:

Completion of the Collection of Physical Apparatus; Physiological Laboratory and Apparatus; Astronomical Observatory and Instruments, and provision for the Education of Women.

The Senate adjourned to 8 p.m. of Wednesday, Jannary 14th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, January 14th, 1885.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. Buchan, Mr. Wolverton, Rev. Father Vincent, Mr. McMurchy, Dr. Larratt Smith, Prof. Wright, Mr. King, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston, Dr. Richardson, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Rev. Principal Caven, Judge Patterson, Mr. McMaster, Chief Justice Caméron, Mr. O'Sullivan.

On motion of Mr. King, seconded by Prof. Loudon, Mr. T. T. Macbeth, B.A., was unanimously elected member of the Senate, in the stead of James Bethune, Q.C., LL.B., deceased.

The Vice-Chancellor presented the following report of the Committee on Options in the Third and Fourth Years, which adopted on motion of the Vice-chancellor, seconded by Dr. Caven:—

To the Senate, etc.:

GENTLEMEN,—Your Committee to whom was referred the statute respecting optional subjects in the Third and Fourth Years, beg to recommend that the statute be adopted in the following form:—

By the Senate, etc.:

Be it enacted, 1. That candidates in the Pass Course of the Third and Fourth Years may, in lieu of one or two of the subjects prescribed for each of those years, take certain of the following subjects, namely: Biblical Greek, Biblical Literature, Apologetics and Church History, according to the following scheme:—

THIRD YEAR.

Biblical Greek may be substituted for the prescribed Classical Greek, or for its equivalent French and German.

Biblical Literature, or *Church History*, may be substituted for History.

Apologetics.—A candidate who takes Mental and Moral Philosophy and Civil Polity instead of Physics, may substitute Apologetics for Moral Philosophy and Civil Polity.

Mental Philosophy and Apologetics may also be taken in lieu of Physics.

FOURTH YEAR.

Biblical Greek may be substituted for the prescribed Classical Greek, or for its equivalent French and German.

Biblical Literature, or Church History, or *Apologetics*, may be substituted for Civil Polity, the Logic of the Fourth Year remaining obligatory and to be taken in the University.

2. That candidates in the Honour Department of Mental and Moral Science and Civil Polity in the Third Year, may substitute *Biblical Literature* or *Church History* for History; and that candidates in other Honour Departments in the same year, may substitute *Apologetics* for Civil Polity.

3. Candidates who exercise these options must present certificates of having attended lectures and passed examinations in the subjects so selected, at an affiliated College other than University College. The minimum for passing at such examinations shall not be less than the minimum required at the University Examinations of the same year. Such Examinations shall not count for Honours, Scholarships, or Medals.

All which is respectfully submitted.

W. MULOCK.

January 8th, 1885. Vice-Chancellor.

On motion of the Vice-Chancellor, seconded by Dr. Caven, the statute in the preceding report received its second reading and passed.

On motion of Prof. Loudon, seconded by Mr. McMurchy, the statute relating to combined University and College Examinations received its second reading and passed.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following resolution was adopted, Mr. Kingsford dissenting :—

That the Senate of the University, understanding from those of its members who took part in the late Conference on University Confederation, that the plan now laid before it is the result of the deliberations of the Conference, and embodies the only practicable terms and conditions to which the consent of all the confederating bodies can be expected, and is submitted for acceptance or rejection as a whole, accepts the said plan as a whole, agrees to do everything in its power to make it a success, and recommends that the necessary legislation, in order to give effect to the plan be promoted by the Government.

On motion of Prof. Loudon, seconded by Chief Justice Cameron, the following resolution was adopted :—

That the Senate feels it a duty to call the attention of the Government to the necessity of increasing the financial resources of the University, in order to carry out the confederation plan laid before it, and requests that the requisite steps be taken to that end.

Moved by Hon. Senator McMaster, seconded by Rev. Father Vincent, and carried, That copies of the resolutions upon the confederation scheme passed by the Senate be transmitted by the Registrar to the Provincial Secretary for the information of the Lieutenant-Governor in Council.

It was decided that a copy of the scheme of confederation, with resolutions relative thereto, be transmitted to the Clerk of Convocation for the information of Convocation.

The Senate adjourned to the call of the chair.

DAN. WILSON,

Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, February 27th, 1885.

Present :—Dr. Wilson (in the Chair), Mr. Moss, Mr. McMurchy, Prof. Wright, Dr. Oldright, Mr. Houston, Mr. O'Sullivan.

Dr. Oldright gave notice that, at the next meeting of the Senate, he would move that a special convocation of the Senate for conferring the Degrees in Medicine be held as soon as possible after the results of the Examinations in Medicine have been reported to the Senate.

Senate adjourned to the call of the chair.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, May 8th, 1885.

Present :—Dr. Wilson (in the Chair), Mr. Moss, Mr. Buchan, Rev. Father Vincent, Mr. Millar, Mr. King, Mr. McFarlane, Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Macbeth, Prof. Loudon, Mr. Kingsford.

Moved by Dr. Wilson, seconded by Prof. Loudon, and carried, That the petition of the Council of Wycliffe College for affiliation be referred to a Committee to consist of the Vice-Chancellor, Rev. Dr. Caven, Prof. Loudon, Col. Gzowski and Dr. Wilson, to report thereon.

Dr. Wilson presented the following report of the Board of Arts Studies relative to Local Examinations, which was received :—

To the Senate, etc. :

GENTLEMEN,—Your Board of Arts Studies beg to report the statute relative to Local Examinations, in the following form :—

That statutes CXI. and CXLV. be hereby repealed, and the following enacted :

1. Local Examinations in certain of the subjects in the Faculty of Arts may be held at Toronto and elsewhere in the Province, according to the regulations hereinafter mentioned.

2. The Senate Committee on Examinations may direct that an Examination may be held at any place where the Board of Trustees of a High School or Collegiate Institute, or the Board of Management of a College or Academy, or a Local Committee formed for the purpose, agrees to provide the necessary accommodation, and guarantees the attendance of at least twelve candidates, and the payment to the University of a sum sufficient to defray all the cost of such Examination.

3. The Senate Committee on Examinations shall, for each place where Local Examinations are held, appoint a Presiding Examiner, whose duty it shall be to receive and distribute the Examination Papers, to exercise strict supervision in the Examination Room, and to collect the answers and send them day by day, under seal, to the Registrar for delivery to the University Examiners.

4. Applications for such Examinations from Local Boards or Committees, must be in the hands of the Registrar at least four weeks, and from intending candidates (according to a form furnished by the Registrar), at least three weeks before the date fixed for the commencement of the Examinations to which the applications have reference.

5. These Local Examinations shall be described as First, Second, and Third. The First Examination shall be held simultaneously with the ordinary June Matriculation Examination ; the Second and Third Examinations shall be held simultaneously with the ordinary May Examinations. The questions at the ordinary and local Examinations shall be identical.

6. The subjects for each Examination shall be arranged in Groups, for any one or more of which a candidate may enter, and the candidate may take either the Pass Examination, or both Pass and Honour Examinations in any such Group or Groups.

7. Every candidate who passes in any Group or Groups, at any Examination, shall be entitled to a certificate to that effect, signed by the Registrar, and every successful candidate for Honours, on payment of a fee of one dollar, shall be entitled to a certificate giving Class in Honours attained.

8. The minimum proportion of marks for Pass in each subject shall be twenty-five per cent., but no candidate entering for a single Group shall be entitled to a place in the Class Lists, unless Pass standing has been secured in each subject of the Group, and an average has been obtained of not less than fifty per cent. of the total number of marks alloted to the subjects of that Group; and no candidate entering for two or more Groups shall be entitled to a place in the Class Lists unless Pass standing has been secured in each subject of the Groups, and an average has been obtained of not less than thirty-three per cent. of the total number of marks alloted to all the subjects of those Groups. The minimum proportion in any subject for Second and for First Class Honours shall be fifty and sixty-six per cent. respectively.

9. The names of all the successful candidates shall be published in a separate list in the Class List, the arrangement being alphabetical for First Class Honours, Second Class Honours, and Pass, respectively.

10. Each candidate at these Examinations shall pay a fee of three dollars.

11. No candidate shall be admitted to the First Local Examination under fifteen, or to the Second under sixteen, or to the Third under seventeen years of age.

12. It shall not be necessary for a candidate to pass the First Examination in any Group as a condition of entering for the Second or Third Examinations in the corresponding Group.

13. The subjects shall, for purposes of the Local Examinations, be grouped as follows:—

First Examination.

Group I.—Greek and Latin of Junior Matriculation.
" II.—Mathematics of Junior Matriculation.
" III.—Any three of the following: (*a*) Latin, (*b*) English, (*c*) French, (*d*) German, (*e*) History and Geography of Junior Matriculation.
" IV.—Physics, Chemistry, and Botany of Junior Matriculation.
" V.—Any two of the subjects in Group III., with any one of the sciences in Group IV.
" VI.—Any two of the sciences in Group IV., with any one of the subjects in Group III.

Second Examination.

Group I.—Greek and Latin of the First Year.
" II.—Mathematics of the First Year.
" III.—Any three of the following: (*a*) Latin, (*b*) English, (*c*) French, (*d*) German of the First Year.
" IV.—(*a*) Chemistry of the First Year, (*b*) Biology of the First Year, and (*c*) Minerology and Geology of the Second Year.
" V.—Any two of the subjects in Group III., with any one of the sciences in Group IV.
" VI.—Any two of the sciences in Group IV., with any one of the subjects in Group III.

Third Examination.

Group I.—Greek and Latin of the Second Year.
" II.—Physics of the Second Year.
" III.—Any three of the following: (*a*) Latin, (*b*) English, (*c*) French, (*d*) German, (*e*) Italian, (*f*) History of the Second Year.
" IV.—Chemistry of the Second Year, with either (*a*) Biology of the First Year, or (*b*) Minerology and Geology of the Second Year.
" V.—Any two of the subjects in Group III., with any one of the sciences in Group IV.

GROUP VI.—Any two of the sciences in Group IV., with any one of the subjects in Group III.

" VII.—Mental Science and Logic of the Second Year.

All which is respectfully submitted.

DANIEL WILSON,
Chairman.

January 8th, 1885.

Dr. Wilson presented the following report of the Boards of Arts and Legal Studies, which was received on motion of Prof. Loudon, seconded by Prof. Galbraith :—

To the Senate, etc. :

GENTLEMEN,—The Boards of Arts and Legal Studies, to whom was referred the question of the establishment of a Department of Political Science, beg leave to report that in view of the fact that the Senate has adopted the scheme of University Confederation, which provides for the establishment of Professorships in Political Economy and Civil Polity, Constitutional Law and Jurisprudence, they recommend that any organization of this Department be delayed until the Senate can have the advice of the new professors, and the students can enjoy the benefits of their instructions.

All which is respectfully submitted.

DANIEL WILSON,
Chairman.

May 8th, 1885.

The following report of the Scrutineers at the Senate Election for 1885, was presented :—

To the Senate, etc. :

GENTLEMEN,—The undersigned Scrutineers appointed to act at the counting of votes cast during the election of Chancellor and members of the Senate for 1885, have the honour to report as follows :—

As Chancellor, Hon. Edward Blake, M.P., Q.C., was elected, no other candidate having been nominated. 147 votes were cast for Mr. Blake.

To represent Convocation on the Senate, John King, M.A., Lachlane McFarlane, M.B., and Samuel Woods, M.A., were elected, the votes cast being as follows :

Mr. King.....138.
Dr. McFarlane.....134.
Mr. Woods.....131.

To represent the legally qualified High School Teachers on the Senate, Mr. L. E. Embree, B.A., was elected. The vote standing : Mr. L. E. Embree, 84 ; Mr. Arch. McMurchy, 42.

All which is respectfully submitted.

W. T. BOYD,
W. FITZGERALD, } Scrutineers.

J. LOUDON,
Pro. Vice-Chancellor.

Moved by Dr. Oldright, seconded by Dr. McFarlane, and carried, That a Convocation for the purpose of conferring Degrees and Honours in the Faculty of Medicine be held on Friday next, 15th inst., at 3 p.m.

The rule requiring notice of motion being suspended, Dr. Oldright moved, seconded by Dr. McFarlane, That in the absence of the Chancellor and Vice-Chancellor, Dr. Wilson be and is hereby appointed Pro. Vice-Chancellor, for the purpose of presiding at the Convocation for conferring Degrees, etc., in Medicine.—*Carried.*

Mr. Millar gave notice that at the next meeting of the Senate, he would move that the report of the Board of Arts Studies regarding the Local Examinations be amended so as to provide, That every candidate who passes in all the subjects of the Junior or Senior Matriculation, shall, on complying with the usual condition respecting Matriculation, be entitled to rank as an Undergraduate, and if a successful candidate for Honours in the subjects included in one or more of the Departments of the Curriculum, shall be entitled to rank alphabetically as an Undergraduate with First or Second Class Honours, along with all other successful candidates at the Local Examination: provided, however, that no Scholarship shall be awarded on marks obtained at these Examinations.

The Senate adjourned to the call of the chair.

DAN. WILSON,
Chairman.

On Friday, May 15th, the Senate assembled in the President's room, and adjourned to Lecture Room No. 8, where Degrees in Medicine were conferred and other proceedings had, as appears of record in the Book of Convocation.

DAN. WILSON,
Chairman.

Minutes of a meeting of the Senate, held in the Senate Chamber, May 20th, 1885.

Present:—Dr. Wilson, (in the chair,) Mr. Moss, Mr. Foster, Prof. Galbraith, Dr. Oldright, Mr. Houston, Prof. Loudon, Mr. Kingsford, Mr. King, Dr. McFarlane, Principal Caven.

On motion of Dr. Wilson, seconded by Mr. Houston, The following resolution was adopted:

That the petition from the Toronto Baptist College for affiliation be referred to the following Committee: Vice-Chancellor, Rev. Dr. Caven, Prof. Loudon, Col. Gzowski, Dr. Wilson and Hon. Wm. McMaster.

Prof. Loudon presented the following report of the Committee on the affiliation of Wycliffe College, which was adopted on motion of Prof. Loudon, seconded by Dr. Caven, Mr. Kingsford dissenting:—

To the Senate, etc.:

Gentlemen,—The Committee to whom was referred the memorial of the Council of Wycliffe College praying for the admission to the privileges of affiliation with the University of Toronto, beg leave to report that after a careful enquiry they are satisfied that the College is provided with an efficient staff for teaching all the subjects included in the options allowed by the Statutes of the University for Theological Colleges admitted to affiliation. They have also ascertained that all students of Wycliffe College are required to pass the Matriculation Examination of this University, and are encouraged to proceed to a Degree. Already several of its students have proceeded to a degree in Arts in this University with Honours.

In view of all the facts here set forth, the Committee pray that the petition of the Council of Wycliffe College be acceded to, and that it be admitted to the privileges of an affiliated College.

All which is respectfully submitted.

J. LOUDON,
Convenor.

Toronto, 14th May, 1885.

Mr. Houston presented the following minority report of the Boards of Arts and Legal Studies relative to the Department of Political Science, which was received on motion of Mr. Houston, seconded by Mr. King:

To the Senate, etc.:

Gentlemen,—The Boards of Arts and Legal Studies in the matter of the proposed Department of Political Science referred to them by the Senate, beg leave to report:

1. That it appears from the order of reference that on the 30th day of November,

1883, the Senate unanimously adopted a resolution which affirms that, "it is expedient to create in the Arts curriculum of the University a Department of Political Science, in which an undergraduate may, on the usual conditions, proceed to the Degree of B.A.

2. That it further appears from the same order of reference, that on the 14th day of December, 1883, the Senate unanimously referred the above mentioned resolution to the Boards of Arts and Legal Studies "with instructions to prepare a scheme for giving it effect."

3. That there is nothing in the order of reference to show that the Senate desired from the Boards of Studies an expression of opinion as to the time when the proposed Department should be organized, or contemplated a postponement of the preparation of the desired scheme until professorships or lectureships in certain of the subjects ordered to be included in the proposed Department should be created in either the University of of Toronto or University College.

4. That in compliance with the specific instructions contained in the order of reference, the subjoined scheme has been carefully prepared and it is herewith submitted to the Senate for approval.

5. That it is desirable to change the name given to the proposed Department in the order of reference, and to call it the Department of Historical and Political Science.

6. That this or some similar scheme should be adopted by the Senate in time to to admit of its incorporation with the Arts Curriculum, which is now undergoing revision, and for the following amongst other reasons :

(*a*) The Honour work in the Department of History, which is at present attached to the Department of Modern Languages, would, under the proposed arrangement, find its natural and proper place in a Department of Historical and Political Science.

(*b*) A better division of work among the University Examiners would be facilitated by the creation of the proposed Department, the subjects grouped under the head of "Civil Polity," in the present curriculum being much more closely related to Historical than to Mental Science.

(*c*) The creation of a Department of Historical and Political Science would tend to further the object in view in the foundation of the Blake Scholarship, which was "to promote and encourage the study of the science of Politics, Political Economy, Civil Polity, and Constitutional History," and which is to a great extent defeated by the conditions under which the Scholarship is at present granted.

(*d*) The grouping of the subjects in question into one Graduating Department would afford an opportunity to make the course in them more extensive and thorough, and to remedy serious defects in the selection and gradation of text-books as the subjects are now arranged.

(*e*) The creation of the proposed Department would meet a growing and reasonable demand that the University should afford to those desiring to make a scientific study of social phenomena, whether actual or historical, an opportunity to do so within the limits of the Arts curriculum, and would go far towards placing this institution abreast of other high-class universities in a most important department of science in which it has fallen far behind many of them.

(*f*) The enlargement of the course of study in the subjects enumerated in the order of reference, would be the natural sequence of the Senate's action in the past, as shewn by a comparison of the curriculums prescribed from time to time, the tendency of its legislation being constant in the direction of a fuller recognition of the importance of the subjects ordered to be included in the proposed Department.

7. The following is the scheme which has been prepared in compliance with the order of the Senate :—

PASS.

Second Examination.

Creasy, Rise and Progress of the English Constitution ;
Fawcett, Manual of Political Economy.

Third Examination.

Smith, History of the English Institutions;
Sterne, Constitutional History and Political Development of the United States;
Bourinot, Parliamentary Procedure and Practice in Canada (Chaps. I and XXII);
Amos, Science of Politics;
Wilson, History of Modern English Law;
Walker, Political Economy.

Fourth Examination.

Bagehot, The English Constitution;
Wilson, Congressional Government: a study in American Politics;
O'Sullivan, Manual of Government in Canada;
Spencer, Study of Sociology;
Markby, Elements of Law;
Jevons, Money and the Mechanism of Exchange.

HONORS.

Second Year.

Taswell-Langmead, English Constitutional History.
Thompson, Elements of Political Economy.

Third Year.

Cox, Institutions of the English Government;
Stubbs, Hallam, and May: Constitutional History of England;
Story, Commentaries on the Constitution of the United States, (Bks. I. and II., and the first five chapters of Bk. III);
Documents illustrative of the Constitutional History of Canada, with special reference to the following:—Articles of Capitulation, 1760; Royal Proclamation under the Treaty of Paris, 1763; Quebec Act, 1774; Constitutional Act, 1791; Lord Durham's Report, 1839; Union Act, 1840; Resolutions of Quebec Conference, 1864; British North America Act (1867) and amending Acts; Royal Instructions to the Governor-General since 1867;
Maine, Ancient Law, and Village Communities;
Cicero, On Laws;
Gibbon, Decline and Fall of the Roman Empire (Chap. XLIV);
Mill, Principles of Political Economy;
Cairnes, Character and Logical Method of Political Economy

Fourth Year.

Hearn, The Government of England;
Cooley, Constitutional Law in the United States;
Todd, Parliamentary Government in the British Colonies;
Freeman, Comparative Politics, and History of Federal Government (Vol. I.);
Aristotle, Politics, (Bks. I.-IV.);
Comparative Constitutional History, with special reference to Greece, Rome, the Great Powers of Modern Europe, and the United States of America;
Maine, Early History of Institutions, and Early Law and Custom;
Holland. Elements of Jurisprudence;
Hall, International Law;
Hyndman, Historical Basis of Socialism in England;
Smith, Wealth of Nations (Rogers' edition);
Roscher, Principles of Political Economy, with Preliminary Essay by Wolowski on "The Historical Method of Political Economy."

In addition to the work above specified, it is suggested that the following be prescribed in the usual way, by regulation :

1. The Latin of the First and Second Pass Examinations.
2. Either the Greek of the First and Second Pass Examinations ; or
3. The French and German prescribed as an alternative for the Greek of these Examinations.
4. All the English (Pass and Honour) prescribed in the Curriculum.
5. All the History (Pass and Honour) prescribed in the Curriculum, and the Ethnology of the Fourth Year.
6. The Mathematics of the First, and the Mechanics of the Second Pass Examinations.
7. The Chemistry, or Biology, of the First Pass Examination, or the Mineralogy and Geology of the Second.
8. The Mental Science (Pass and Honour) of the Second Year, and the Logic (Pass and Honour) of the Second and Fourth Years.

All which is respectfully submitted.

W. HOUSTON.

On motion of Prof. Loudon, seconded by Dr. Caven, the statute affiliating Wycliffe College, received its first reading.

Moved by Mr. Kingsford, seconded by Dr. Oldright, and carried, That the committee appointed last year to consolidate the Statutes of the University be reappointed.

The Senate adjourned to May 21st, at 4 p.m.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate held in the Senate Chamber, June 4th, 1885.

Present :—Dr. Wilson (in the chair), Mr. Moss, Mr. Buchan, Rev. Father Vincent, Mr. Embree, Mr. Falconbridge, Mr. Houston, Dr. Richardson, Mr. Kingsford, Mr. King, Dr. McFarlane, Hon. Wm. McMaster, Mr. O'Sullivan, Rev. Dr. Caven.

Mr. Buchan presented the Report of the Board of Arts Studies on the Curriculum, being the Arts Curriculum for 1886-1890. It was received, and ordered to be distributed to members of the Senate.

Mr. Moss presented the Report of the Board of Legal Studies on the Curriculum, being the Law Curriculum for 1886-1890. It was received and ordered to be distributed on motion of Mr. Moss, seconded by Mr. O'Sullivan.

Dr. McFarlane presented the Report of the Board of Medical Studies on the Curriculum, being the Medical Curriculum for 1886-90. It was received and adopted on motion of Dr. McFarlane, seconded by Dr. Richardson.

Moved by Mr. Houston, seconded by Mr. King, and carried, That H. E. Buchan, M.A., M.D., be appointed to represent the University in the Council of the College of Physicians and Surgeons of Ontario for the ensuing term of five years.

The Senate adjourned to the call of the chair.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, June 10th, 1885.

The Senate assembled in the Senate Chamber and proceeded to Convocation Hall, where degrees were conferred and other proceedings had, as appears of record in the Book of Convocation.

MINUTES of a meeting of the Senate, held in the Senate Chamber, June 26th, 1885.

Present :—Dr. Wilson (in the chair), Mr. Moss, Mr. Buchan, Mr. Embree, Prof. Hutton, Mr. McQuesten, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Mr. O'Sullivan,

Dr. Oldright, Mr. Houston, Mr. Gibson, Dr. Richardson, Mr. McBeth, Prof. Loudon, Mr. Kingsford, Mr. King, Dr. McFarlane.

Dr. Wilson presented the following report of the committee on the Affiliation of the Toronto Baptist College, which was adopted on motion of Dr. Wilson, seconded by Prof. Loudon.

To the Senate, etc.:

GENTLEMEN,—Your committee appointed to consider and report upon the application of the Board of Trustees of the Toronto Baptist College, asking for the admission of the College to affiliation with the University of Toronto, beg leave to report that after full enquiry they have satisfied themselves as to the efficient organization of the College, and its staff of teachers as fulfilling the requirements contemplated in the recent extension of options in the University courses. They have ascertained that the students of the Toronto Baptist College are systematically encouraged to avail themselves of the facilities for study afforded by University College, and to proceed to a degree in the University. They, therefore, recommend that the prayer of the petition be favourably entertained; and that the Toronto Baptist College be admitted to affiliation with the University of Toronto.

All which is respectfully submitted.

DAN. WILSON,
Chairman.

June 26th, 1885.

Moved by Mr. Gibson, seconded by Mr. Moss, and carried, That Mr. Gibson's statute, amending the statutes relating to the degree of LL.D., be referred to the Boards of Law and Art Studies.

On motion of Dr. Wilson, seconded by Mr. O'Sullivan, the following resolution was adopted: That in the case of Undergraduates who have been unable to take the examinations for Standing and Degrees in the recent Examinations, owing to their being on active military service in the North-West, they shall be allowed their examinations in their respective years; and in case of men who have been pursuing an Honour Course, they shall be allowed their options in their several departments.

Mr. Houston, for Mr. Coyne, gave notice that at the next meeting of the Senate he would move that it is expedient to establish in the Arts Course an Honour Department, to be called the department of "English," in which, upon conditions analogous to those relating to the other departments in the existing curriculum, Undergraduates may proceed to the degree of B.A.

Moved by Mr. Kingsford, seconded by Mr. Houston, and carried, That a committee, composed of the Vice-Chancellor, Dr. Wilson, Prof. Loudon, Mr. Woods, Mr. O'Sullivan, Mr. McQuesten, Mr. Coyne, Mr. King, and the mover and seconder, be appointed to consider the subject of giving notice of Senate meetings, of procedure at such meetings, the advisability of holding regular meetings, and the adoption of a more satisfactory system of reporting Senate proceedings.

The report of the Boards of Law and Arts Studies, being the Law curriculum for 1886-90, was adopted on motion of Mr. Gibson, seconded by Mr. Houston.

The report of the Board of Arts Studies, being the Arts curriculum for 1886-90, was adopted on motion of Dr. Wilson, seconded by Mr. Houston.

Dr. McFarlane gave notice that, at the next meeting of the Senate, he would introduce as a statute the Medical curriculum for 1886-90.

Dr. Wilson, seconded by Prof. Loudon, moved the adoption of the report of the Board of Legal and Arts Studies in the proposed Department of Political Science.

In amendment, Mr. Houston, seconded by Mr. Kingsford, moved the adoption of the minority report.

The debate on the amendment was adjourned on motion of Dr. Oldright, seconded by Mr. King.

The Senate adjourned to Thursday and Friday, July 2nd and 3rd.

DAN. WILSON.
Chairman

MINUTES of a meeting of the Senate, held in the Senate Chamber, July 2nd, 1885.

Present.—Dr. Wilson (in the chair), Mr. Moss, Mr. Miller, Mr. Foster, Prof. Galbraith, Mr. Houston, Dr. Oldright, Mr. Gibson, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Mr. King, Dr. McFarlane, Mr. Woods, Dr. Caven, Mr. Justice Patterson, Mr. O'Sullivan.

Dr. Wilson communicated to the Senate the substance of a letter in which the statement was made that the University of Toronto was conferring degrees in England.

On motion of Dr. Wilson, seconded by Mr. Gibson, The Registrar was instructed to correct in the Press the statement that degrees were so conferred by the University of Toronto.

The debate on the question of establishing a Department of Political Science was resumed.

Moved in amendment to the amendment, by Mr. King, seconded by Mr. Foster, and carried, That the reports be referred back to the Boards of Studies for further consideration, with instructions to report to the Senate at an early date.

Mr. Gibson presented the following report of the Boards of Arts and Legal Studies, which was adopted on motion of Mr. Gibson, seconded by Mr. Miller :—

To the Senate, etc. :

GENTLEMEN,—Your Boards of Studies to whom was referred the statute relative to the Degree of LL.D., beg leave to report the statute for adoption in the following form :—

By the Senate etc. :

Be it enacted, 1. The Degree of Doctor of Laws shall be conferred *honorés causâ* only.

2. The said degree shall not be conferred upon any person without the authority of a resolution of the Senate, carried at a regular meeting thereof by at least three-fourths in number of the members present, such three-fourths being also not less than a majority of the whole Senate, and no such resolution shall be declared carried without such majority.

3. No such resolution shall be voted upon unless at least two weeks' previous notice thereof shall have been given at a meeting of the Senate, nor unless at least one week's notice shall have been given to all members that such resolution is to be considered at the meeting at which it is proposed to introduce such resolution, and such notice shall prominently call attention to such proposed resolution.

4. All statutes relating to the said degree, at present in force, are hereby repealed.

All which is respectfully submitted.

DAN. WILSON,
Chairman.

July 2nd. 1885.

On motion of Mr. Gibson, seconded by Mr. Millar, The statute contained in the preceding report received its second reading and passed.

On motion of Dr. Wilson, seconded by Mr. Houston, The statute adopting the Arts Curriculum for 1886-90, received its first reading.

On motion of Dr. Oldright, seconded by Mr. Gibson, The statute adopting the Medical Curriculum for 1886-90, was read a first time.

On motion of Mr. Moss, seconded by Mr. King, The statute adopting the Law Curriculum for 1886-90, was read a first time.

On motion of Dr. Wilson, seconded by Dr. Caven, The statute affiliating the Toronto Baptist College with the University, was read a first time.

On motion of Mr. Gibson, seconded by Dr. Caven, Dr. Wilson was appointed to confer degrees at the next meeting of the Senate, in the stead of the Vice-Chancellor.

The Senate adjourned to Friday, July 3rd, at 8 o'clock.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, July 3rd, 1885.

Present :—Dr. Wilson (in the chair), Mr. Moss, Mr. Millar, Mr. Embree, Mr. Foster, Prof. Galbraith, Dr. Oldright, Mr. Houston, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Mr. King, Mr. Woods, Dr. Caven.

On motion of Dr. Wilson, seconded by Dr. Caven, The following statute was read a second time and passed :—

By the Senate, etc. :

Be it enacted, That the Toronto Baptist College be and the same is hereby affiliated with the University of Toronto.

On motion of Mr. Moss, seconded by Mr. Foster, The Senate went into Committee of the whole on the Law curriculum for 1886-90.

The Committee reported, and on motion of Mr. Moss, seconded by Mr. Foster, The Statute embodying the Law curriculum for 1886-90, received its second reading and passed.

On motion of Mr. Houston, seconded by Mr. Embree, the Senate went into Committee of the whole on the Arts Curriculum for 1886-90.

The Committee reported, and on motion of Mr. Woods, seconded by Mr. Millar, the Statute emboding the Arts Curriculum for 1886-90, received its second reading and passed.

On motion of Mr. Houston, seconded by Mr. Kingsford, the Senate went into Committee of the whole on the Medical Curriculum for 1886-90.

The Committee reported, and on motion of Dr. Wilson, seconded by Mr. King, the Statute embodying the Medical Curriculum for 1886-90, received its second reading and passed.

The Senate adjourned to the call of the chair.

WM. CAVEN,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, July 16th, 1885.

Present :—Dr. Caven. (in the chair,) Mr. Moss, Mr. Falconbridge, Prof. Loudon, Dr. Oldright, Mr. Houston, Mr. Embree.

The report of the Examiners at the recent Matriculation Examination, was presented and adopted.

The Senate adjourned.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, October 2nd, 1885.

Present :—Dr. Wilson, (in the chair,) Mr. Moss, Prof. Loudon, Mr. Falconbridge, Dr. Oldright.

A letter was read from the Assistant Provincial Secretary, informing the Senate of the re-appointment of the Honourable William McMaster, the Honourable Matthew Crooks Cameron, and the Honourable John Alexander Boyd, members of the Senate for the period ending 31st December, 1887.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, October 23rd, 1885.

Present :—The Vice-Chancellor, (Mr. Mulock,) Dr. Wilson, Rev. Father Vincent, Rev. Dr. Sheraton, Prof. Chapman, Dr. McFarlane, Mr. Foster, Prof. Galbraith, Mr. Houston, Prof. Loudon, Mr. O'Sullivan Rev. Dr. Caven.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following resolution was adopted :—

That the letter of the Reverend Principal Caven relative to the affiliation of Knox College, be referred to a Committee, to consist of the Vice-Chancellor, Dr. Wilson, Prof. Loudon, Col. Gzowski, and Rev. Father Vincent, with instructions to report.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move, That on the 13th of January, 1882, a Committee "appointed to report upon the income and expenditure of the University of Toronto and University College, and to consider the best means under the circumstances of improving the efficiency and extending the usefulness of those institutions," recommends "after due consideration of the whole question," certain additions to the teaching staff of University College.

That the additions then recommended include a lecturer in Political Economy, and a lecturer in "Constitutional Law and Principles of Jurisprudence," each at a salary of $800 a year ; and a demonstrator of Physics at a salary of $1,200 a year.

That the recommendation to create the above mentioned lectureships was based on the statement that "in certain branches, such as Constitutional Law and Political Economy, students have not hitherto had the benefit of any teaching, and it is essential that instruction in these branches should not be neglected whilst they are considered worthy of forming part of a liberal education."

That the opinion thus expressed is not only sound in itself, but in strict accordance with the action of the Senate in awarding during the past fifteen years an annual Scholarship for proficiency in the subjects named, and in giving them steadily increasing prominence in the Arts Curriculum.

That while the Demonstratorship of Physics was created shortly after the report was submitted, the lectureships have been held till now in abeyance owing to want of funds.

That the recent abolition of Scholarships in the Second and Third years sets free about $2,500 a year hitherto spent in maintaining them, which sum has not yet been appropriated to any other service in connection whith either the University or the College.

That in the opinion of the Senate in view of the admitted importance of the subjects referred to in the above report, and of the urgent necessity for a re-arrangement and enlargement of the work prescribed in them in the University Curriculum, the time has come for giving at least partial effect to the recommendations of the Committee by the creation of a Lectureship in Polical Economy.

That the recommendation be forwarded to the Lieutenant-Governor in Council, with a request from the Senate that a Lecturer in Political Economy be appointed as soon as possible at a salary of a year, the appointment to take effect, and the work to begin with the calendar year 1886.

Mr. Houston gave notice that at the next meeting of the Senate he would move, That in the present state of the funds of the University and University College, and while money, that is very much needed to improve the examination system of the former and the teaching facilities of the latter, is not obtainable, it is inexpedient to expend on scholarships, medals or prizes any portion of the revenue derived from the public endowment of these institutions.

Prof. Loudon, for Mr. Moss, gave notice of intention of moving at the next meeting that the statute relating to the Blake Scholarship be amended by the substitution of the following as the subjects for examination :—
and by a provision for the appointment by the Senate of special examiners.

On motion of Dr. Wilson, seconded by Dr. Caven, the following resolution was adopted :—

Resolved,—That the Senate of the University of Toronto have learned with profound regret of the death of John Milne Buchan, M.A., Principal of Upper Canada College, and a member of this Senate. His distinguished career as an Undergraduate gave assurance of the success which he subsequently achieved in every educational position to which he was promoted. As the representative of Upper Canada College on this Board, he secured the esteem of all its members. His decision of character gave weight to opinions formed

by him as the result of varied experience both as a School Inspector and as a Teacher, while his unvarying courtesy added to his influence and won concurrence in his views. In recording the loss which this Senate sustains by his death, they desire to convey to his bereaved widow and family the assurance of profound sympathy in their irreparable loss.

That a copy of this resolution be forwarded by the Registrar to Mrs. Buchan.

Senate adjourned to the evening of Friday, Oct. 30th.

Confirmed.

W. MULOCK.
Vice Chancellor.

Minutes of a meeting of the Senate, held in the Senate Chamber, Oct. 30th, 1885.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Fulton, Rev. Father Vincent, Rev. Dr. Sheraton, Mr. Millar, Prof. Hutton, Mr. Falconbridge, Prof. Galbraith, Mr. Gibson, Dr. Richardson, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Mr. King, Rev. Dr. Caven, Rev. D. J. Macdonnell.

A letter was read from Mr. Houston, resigning his position as a member of the Library Committee.

The Vice-Chancellor presented the following report of the committee on the affiliation of Knox College.

To the Senate, etc.:—

GENTLEMEN,—The committee to whom was referred the application of Knox College for affiliation to the University of Toronto, beg leave to report that they have ascertained that the students of this College habitually pursue their Undergraduate studies with a view to proceeding to a Degree in this University. The committee have also satisfied themselves that the College is adequately equipped, and fitted to teach the subjects embraced in the Undergraduate course. They therefore recommend that Knox College be admitted to affiliation with this University, as desired.

All which is respectfully submitted.

WM. MULOCK,
Vice-Chancellor.

Oct. 20th, 1885.

On motion of Mr. Coyne, seconded by Mr. Millar, Mr. Houston's statute respecting English in the Arts Curriculum, was read a first time.

On motion of Mr. Kingsford, seconded by Mr. Coyne, Mr. Kingsford's statute relative to the degree of LL.D., was read a first time.

On motion of the Vice-Chancellor, seconded by Mr. Falconbridge, the Vice-Chancellor's statute respecting the Moss Scholarship, and the Classical Scholarship in the First Year, were read a first time.

On motion of the Vice-Chancellor, seconded by Mr. Falconbridge, the Vice-Chancellor's statute relative to the increase of Scholarships at Junior Matriculation, was read a first time.

On motion of the Vice-Chancellor, seconded by Mr. Millar, the Vice-Chancellor's statute respecting fees in the case of the children of the late J. M. Buchan, M.A., was read a first time.

On motion of Dr. Fulton, seconded by Dr. Richardson, Dr. McFarlane's statute relative to the examination of Fourth Year Medical Undergraduates in 1886, was read a first time.

On motion of Prof. Loudon, seconded by Dr. Fulton, the following resolution was adopted:—

That at the May Examinations of 1886 the Examination in Pass Physics of the 2nd Year be conducted according to the curriculum dated 1885; and that the Examination in Pass Physics of 3rd and 4th Years be conducted according to the curriculum dated 1880.

Mr. King gave notice that, at the next meeting of the Senate, he would introduce a statute amending statute No. with respect to the abolition of medals at the Final Examination for the Degree of B.A., with Honours, and providing for the award of one gold and one silver medal, upon the special recommendation of the Examiners, to the students who at such Examination have been placed respecting first and second in the First Class in any of the Departments, viz. :—Classics, Mathematics, Modern Languages with History, Natural Sciences, Mental and Moral Science, and Civil Polity.

The Senate adjourned to Friday, November 6th.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 6th, 1885.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. Dickson, Dr. Fulton, Rev. Dr. Sheraton, Mr. Embree, Prof. Chapman, Prof. Hutton, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Mr. Houston, Mr. Gibson, Mr. Macbeth, Prof. Loudon, Mr. Kingsford, Mr. King, Dr. McFarlane, Mr. Woods, Rev. D. J. Macdonnell.

Mr Houston gave notice that, at the next meeting of the Senate, he would move That, in the opinion of the Senate, the sub-departments of French, Italian and Spanish in University College, should be grouped so as to form one Lectureship, under the title of The Romance Languages. That the salary attached to the Lectureship so formed should be $1,300 a year, and that the salaries attached to the Lectureship in Rhetoric and English Literature, the Tutorship in Classical Literature, and the Demonstratorship of Physics, should each be fixed at the same amount. That these recommendations be laid before the Lieutenant-Governor as soon as possible, in order that the proposed changes may take effect during the current session.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The report recommending the affiliation of Knox College with the University was adopted, Mr. Kingsford dissenting.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the statute affiliating Knox College received its first reading.

On motion of Dr. Wilson, seconded by Prof. Loudon, The statute directing that Honour men be arranged alphabetically in three classes, received its first reading.

Moved by Dr. Wilson, seconded by Mr. Falconbridge, That the name of Prof. Chapman be placed on the membership of the Board of Arts Studies, in the stead of that of Mr. Buchan, deceased.

Moved in amendment by Mr. Gibson, seconded by Mr. King, That Mr. Houston's name replace that of Mr. Buchan.

The amendment was lost, and the motion carried.

On motion of Mr. King, seconded by Mr. Macbeth, Mr. King's statute to restore medals in the Fourth Year received its first reading.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The following statute received its second reading and passed :—

By the Senate, etc. :

Be it enacted, That in view of the services rendered to the University and to Upper Canada College by the late John Milne Buchan, M.A., his children shall be admitted to all the privileges of students of Upper Canada College, of University College, and of this University, without payment of any of the fees ordinarily exacted.

On motion of Dr. McFarlane, seconded by Dr. Fulton, The following statute received its second reading and passed :—

By the Senate, etc. :

Be it enacted, That the Fourth Year Examinations in the Faculty of Medicine to be held in April of 1886, be conducted according to the Medical Curriculum dated 1881.

The Vice-Chancellor presented a report of the Boards of Studies on local Examinations. The report was ordered to be printed and distributed to the members of the Senate.

Moved by Prof. Loudon, seconded by Mr. Moss, That in the opinion of the Senate, it is inadvisable to prescribe a complete curriculum in Political Science, until instructors shall have been appointed in that Department in University College.

Moved in amendment by Mr. Houston, seconded by Mr. Kingsford, That all the words after "That" where it first occurs in the motion be struck out, and the following substituted: "It is inexpedient to hamper the legislative action of the Senate by asserting as a principle that the scope of the Arts Curriculum of the University should be limited by the incapacity of any of its affiliated Colleges to impart instruction in any branch of knowledge which "is considered worthy of forming part of a liberal education."

The amendment was lost on the following division:

Yeas.—Messrs. Houston, Kingsford, King, Macdonnell and Embree—5.

Nays.—Prof. Hutton, Prof. Loudon, Mr. Moss, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Prof. Chapman, Dr. Sheraton, Mr. Woods and Dr. Wilson—10.

The original motion was carried on the same division.

Moved by Mr. Houston, seconded by Mr. King, That the Senate, in view of the importance of Political Economy, Constitutional Law, and Jurisprudence, and recognizing that "it is essential that instruction in these branches should not be neglected whilst they are considered worthy of forming part of a liberal education," concurs in the recommendation contained in the report submitted to the Senate on the 13th of January, 1882, namely, that a Lecturer in Political Economy, and a Lecturer in Constitutional Law and Jurisprudence, be added to the staff of University College.

Moved in amendment by Mr. Kingsford, seconded by Mr. Falconbridge, That the Senate do not now recommend the appointment of a Lecturer on Political Economy, but that they do hereby re-affirm the resolution passed on the 26th October, 1883, relative to the appointment of a Professor of Romance Languages, and do hereby respectfully request that said appointment be made forthwith.

The debate on the amendment was adjourned on motion of Mr. King, seconded by Mr. Macdonnell.

The Vice-Chancellor, seconded by Dr. Wilson, moved the second reading of the following Statute:—

By the Senate, etc.:

Be it enacted, That the sum of three hundred and sixty dollars hetofore set apart for Scholarships at Senior Matriculation be, and the same is hereby transferred to Junior Matriculation, and applied towards the following additional Scholarships which are hereby established, viz.:—

One in Classics of	$80 00.
" Mathematics of	80 00.
" English, French, German and History of	80 00.
Two in General Proficiency, one being of the sum of	60 00.
And one being of the sum of	50 00.

Moved in amendment by Mr. Houston, seconded by Mr. Embree, That no appropriation out of the public funds of the University be made for additional Scholarships at Junior Matriculation until additions declared by the Senate to be necessary for the purpose of increasing the efficiency of University College be made to its present staff.—Lost.

Moved in amendment by Mr. Kingsford, seconded by Mr. Moss, That the proposed Statute be amended by striking out the words "each being of the sum of $60," and substituting the following words, "One being of the sum of $70, and one being of the sum of $50.—*Carried.*

The Statute was then read a second time and passed, Mr. Houston dissenting.

The Senate adjourned to Saturday, November 14th, at 8 p.m.

W. MULOCK,
Vice-Chancellor

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 14th, 1885.

Present :—The Vice-Chancellor, (Mr. Mulock,) Dr. Wilson, Dr. Fulton, Rev. Father Vincent, Rev. Dr. Sheraton, Mr. Embree, Mr. Houston, Mr. Gibson, Prof. Loudon, Dr. Larratt Smith, Mr. Kingsford, Mr. King, Prof. Chapman, Prof. Hutton, Mr. Falconbridge, Dr. Oldright, Dr. McFarlane, Mr. Woods, Rev. Dr. Caven.

It was ordered that the Medical Tickets of the Western University be accepted.

Mr. Kingsford presented the report of the Committee on Senate Procedure, which was ordered to be printed and distributed to members of the Senate.

The Senate went into Committee on the Report of the Board of Studies on Local Examinations, which was adopted on motion of the Vice-Chancellor, seconded by Dr. Wilson.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, The Statute embodying the regulations adopted in the above report, received its first reading.

On motion of Mr. King, seconded by Mr. Gibson, Mr. Kingsford was appointed a member of the Library Committee in the stead of Mr. Houston, resigned.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following Statute received its second reading and passed :—

By the Senate, etc.:

Be it enacted, That Knox College be, and the same is hereby affiliated with the University of Toronto.

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following statute received its second reading and passed :—

By the Senate, etc.:

Be it enacted, That the sum of $—— (which with accrued interest thereon now amounts to $——), having been donated to this University by friends of the late Chief Justice Moss, wherewith to establish a Scholarship, it is hereby enacted,

That a Scholarship of the value of $120 will be annually offered for competition in the subjects of Greek and Latin Classics at the First Year's Examinations, and shall be known as "The Moss Classical Scholarship."

On motion of the Vice-Chancellor, seconded by Dr. Wilson, the following statute received its second reading and passed :—

By the Senate, etc.:

Be it enacted, That the Scholarship in Classics of $120 heretofore awarded at the First Year's Examination be and the same is hereby abolished, in consequence of the endowment of a like Scholarship in lieu thereof by the friends of the late Chief Justice Moss.

Mr. Houston's resolution as to Lecturers in Political Economy and Constitutional Law, and Mr. Kingsford's amendment thereto were withdrawn.

Mr. Houston's resolution as to Scholarships, Prizes and Medals was discharged.

Mr. Houston's motion respecting salaries in Uuniversity Colleges was withdrawn.

Mr. King's motion that his statute to restore medals in the Fourth Year be read a second time and passed was *lost*. Mr. Kingsford seconder.

Mr. Houston's statute respecting English in the Arts Course was discharged.

Mr. Kingsford, seconded by Dr. Larratt Smith, moved that the Statute respecting the Degree of LL.D. be read a second time and passed.

On motion of Mr. Houston, seconded by Mr. King, the debate on this statute was adjourned.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,

Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, February 12th, 1886.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Dickson, Mr. Millar, Mr. Embree, Prof. Hutton, Prof. Galbraith, Mr. Macbeth, Prof. Loudon, Mr. Kingsford, Mr. King, Mr. O'Sullivan, Rev. Dr. Caven, Rev. Dr. Sheraton, Rev. Dr. Castle, Mr. Mortimer Clark.

The Senate adjourned to Monday, February 15th, at 8 o'clock.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, February 15th, 1886.

Present :—Hon. The Minister of Education, The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Dickson, Dr. Fulton, Mr. Wolverton, Rev. Dr. Sheraton, Mr. Gibson, Hon. Wm. McMaster, Rev. Dr. Caven, Rev. Dr. Castle, Mr. Mortimer Clark, Dr. Larratt Smith, Prof. Hutton, Mr. Falconbridge, Mr. Foster, Mr. Houston, Mr. Kingsford, Prof. Loudon.

Mr. Kingsford presented the Report of the Committee on Senate Procedure, and gave notice that, at the next meeting of the Senate, he would move its adoption.

On motion of Dr. Wilson, seconded by Rev. Dr. Castle, the following resolution was adopted :—

That it is desirable to provide a scheme for *united action* in the Matriculation Examinations of the University, with the Examinations for First and Second Class Teachers.

On motion of Dr. Wilson, seconded by Mr. Clark, the following resolution was adopted :—

That a Committee composed of Dr. Caven, Dr. Wilson, Prof. Loudon, Dr. Sheraton, Mr. Wolverton, Mr. Houston, Prof. Galbraith and the Vice-Chancellor, be appointed with instructions to confer with the Minister of Education with a view to preparing a scheme for the joint conduct of University Matriculation and Local Examinations and Examinations for First and Second Class Teachers, and to report the result of such conference to the Senate.

Mr. Kingsford, seconded by Dr. Larratt Smith, moved the second reading of the following statute :—

That Statute 157 be amended by adding thereto the following proviso : Provided that this statute shall not apply to those LL.B.'s now entitled to the Degree of LL.D. in course, or to Undergraduates now taking the LL.B. course, in complying, within five years from this date with the requirements of the statutes in that behalf previous thereto ; and that such proviso be read as part of the said Statute 157.

Lost on the following division :—

Yeas :—Drs. Caven and Smith, Prof Loudon and Mr. Kingsford—4.

Nays :—Drs. Wilson, Castle, Fulton, Sheraton, Messrs. Clark, Gibson, Houston, Wolverton, Foster and Prof. Hutton—10.

On motion of Mr. Houston, seconded by Mr. Gibson, Mr. Houston's statute respecting Civil Polity in the Second, Third and Fourth Years of the Arts Course, was read a first time.

The Senate adjourned to the call of the chair.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, February 22nd, 1886.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Rev. Dr. Castle, Rev. Dr. Sheraton, Mr. Mortimer Clark, Mr. Embree, Prof. Hutton, Mr. Falconbridge, Prof. Galbraith, Mr. Houston, Prof. Loudon, Mr. Kingsford, Mr. King, Rev. Dr. Caven.

Dr. Wilson presented the following report of the Committee on Matriculation and Teachers' Examinations :—

To the Senate, etc.:

GENTLEMEN,—Your Committee appointed to confer with the Hon. The Minister of Education with a view to uniting the extra-mural University Honour and Pass Matriculation Examinations with the Examinations for First and Second Class Teachers, beg to report that they have had an interview with the Minister of Education, and, as the result of that conference, make the following recommendations :—

1. That these Examinations, other than Matriculation Examinations for Scholarships, be held at the same time and at the same places.

2. That they be conducted by the same Presiding Examiners who shall be appointed by the Education Department.

3. That the papers for the Matriculation and Local Examinations be prepared by the University Examiners, printed by the University, and delivered to the Education Department for transmission to the presiding Examiners.

4. That the answers written at the Matriculation and Local Examinations be returned to the Department to be then forthwith transmitted to the Registrar.

5. That applications for the holding of Matriculation or Local Examinations be made to the University.

6. That the Chairman of the Central Committee arrange with the Registrar a common time table for the conduct of the various Examinations.

7. That the paper used at the University Examinations be the same as that used at the Examinations for Teachers.

8. That the standing of successful candidates for First and Second Class Teachers' Certificates shall be accepted *pro tanto* by the University, at any Examination for Matriculation other than for Scholarships.

9. Your Committee beg to add that the Minister of Education intimated to the Committee that it was his intention to recommend such changes in the Departmental Regulations as would entitle candidates for Second Class Certificates to credit for Examinations passed by them in the subjects of Latin, French and German of the Matriculation.

All which is respectfully submitted.

DANIEL WILSON,
Chairman.

February 22nd, 1886.

On motion of Mr. Houston, seconded by Mr. Kingsford, Mr. Houston's Statute respecting English in the Arts Course received its first reading.

The Vice-Chancellor, seconded by Mr. Houston, moved the second reading of the following Statute :—

By the Senate, etc. :

Be it enacted, 1. That Statutes Nos. 111 and 145 be and the same are hereby repealed.

2. That Local Examinations may be held in the subjects of the Matriculation work in the Faculty of Medicine, and certain of the subjects in the Faculty of Arts hereinafter referred to at Toronto and elsewhere in the Province of Ontario.

3. At least two months before the day appointed for the holding of the regular June Matriculation Examinations the authorities of any School, Academy or College desiring the holding of such Local Examinations, shall send to the Registrar a written application therefor.

4. That there shall be a Presiding Examiner appointed by the Senate Committee on Examinations at such place where a Local Examination is to be held, whose duty it shall be to receive and distribute the Examination Papers, to be in attendance during the whole period of such Examination, to exercise strict supervision in the Examination room, (over which he shall have exclusive control,) to collect the answers and return them day by day under seal to the Registrar, and generally to require such Examinations to be conducted in conformity with the regulations and directions of the University in that behalf.

5. In order to the holding of such Local Examinations it must appear that there will be at least five candidates for examination at the place where such Examination is desired.

6. Local Examinations on the subjects of the Matriculation work in Arts or Medicine shall be held simultaneously with the ordinary June Matriculation Examinations in Toronto, and upon the same papers.

7. Each candidate may take all or any of the subjects in the Matriculation work.

8. Each candidate for Matriculation shall with his or her application send to the Registrar the Matriculation fee of $5.00. Other candidates shall pay a fee of $2.00.

9. Candidates passing the Local Examinations elsewhere than at Toronto, shall not be eligible for Scholarships. The names of each candidate shall be published in a separate list in the Class lists, the arrangement being alphabetical for First Class Honours, Second Class Honours, and Pass respectively.

10. The like regulations shall apply to Local Examinations in the subjects of the First Year's Examinations in the Faculty of Arts.

11. That Local Examinations on other parts of the Arts Curriculum may be held under the direction of the Committee on Examinations at the request of any institution of learning.

12. That any candidate for Matriculation in any faculty who may not succeed in all the subjects of Matriculation shall be classed in the local lists in each subject as he shall have passed.

Moved in amendment by Dr. Wilson, seconded by Mr. Embree, That the following clauses be added to the statute. *Carried.*

13. That in lieu of conducting such Local Examinations on Junior Matriculation work or parts thereof in manner above provided, the same may be held from time to time in connection with the Examinations conducted by the Education Department for First and Second Class Teachers, in such event the Senate Committee on Examinations under instructions from the Senate arranging for the transmission of the Examination questions to the Education Department for distribution by them amongst the candidates; for the return of the answers of candidates; the appointment of Presiding Examiners by the Department; the settling of a common time table; and of such other matters as may be necessary, with a view to the holding of such Examinations in a manner as inexpensive as efficiency will permit with a due regard to the public convenience.

14 That until the Senate by resolution otherwise determines the standing of candidates who have passed, or may hereafter pass the Examinations of the Department of Education for First or Second Class Teachers' Certificates, shall be accepted *pro tanto* at any Junior Matriculation Examination, provided always that all candidates for Scholarships shall take the full Matriculation Examination.

The Statute as amended received its second reading and passed.

Mr. Kingsford moved, seconded by Mr. King, That the report of the Committee on Senate procedure be adopted.

The debate on this motion was adjourned on motion of Mr. Houston, seconded by Mr. Embree.

On motion of Dr. Wilson, seconded by Dr. Caven, the following resolution was adopted:—

That the revised scheme of studies in Oriental Literature be referred to the Board of Arts Studies; and that the following be a Committee to confer with them, with a view to presenting a joint report to the Senate, viz., Dr. Caven, Dr. Castle, Dr. Sheraton, Mr. Gibson, Mr. Houston; Dr. Wilson to be convener.

Mr. Houston gave notice that at next meeting of Senate he would move That the University Examiners in all Faculties be instructed to accept words spelt in accordance with the orthographical rules recommended jointly by the Philological Society of England and the American Philological Association.

It was decided that a meeting of the Senate be held in the Senate Chamber on Thursday, 11th March, 1886, at 8 p.m., to continue in session on Friday and Saturday thereafter.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, March 11th, 1886.

Present:—Dr. Wilson (in the chair), Dr. Fulton, Rev. Mr. Wolverton, Rev. Father Vincent, Rev. Dr. Sheraton, Mr. Mortimer Clark, Mr. Millar, Mr. Embree, Prof. Chapman, Prof. Hutton, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Macbeth, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Mr. King, Mr. Woods, Rev. Dr. Caven, Rev. D. J. Macdonnell.

It was decided that second-class certificates, awarded in the past, be accepted *pro tanto* for Junior Matriculation.

Dr. Fulton gave notice that, at the next meeting of the Senate, he would introduce a statute to amend the Medical Curriculum as follows :—

1. That in clause 1, page 8 (?), the following words be omitted : "exclusive of those allotted to Chemistry."

2. That the last clause on page 7 be omitted, viz., "That no undergraduate in the Honour Course who has degraded into a lower year will be permitted, at the next ensuing examination, to compete for medals, scholarships, or relative standing, except by special permission of the Senate, to be granted only in case of illness or for other grave reasons."

3. That the clause relating to Scholarships (page 9, third clause from the bottom) be amended by omitting the words "and that he is not an undergraduate or graduate in the Faculty of Medicine of any other University."

Mr. Houston gave notice that, at the next meeting of the Senate, he would move for leave to introduce a statute making the work for Matriculation and the First Year in the Faculty of Law identical with the work for Matriculation and the First Year in the Faculty of Arts ;

Also, That Statute CVIII. be referred to a special Committee composed of with instructions to consider what amendments it is expedient to make in the conditions on which the Blake Scholarship has heretofore been awarded ;

Also, That it is expedient to create in the Arts Curriculum an Honour Graduating Department, entitled "Greek and Oriental Languages," and to instruct the special Committee on the revision of the work in Oriental Languages to prepare a course that will, in the Third and Fourth Years, be a fair equivalent for Latin ;

Also, That he would introduce a statute substituting for the second regulation on page 5 of the Arts Curriculum, relating to the Honour Course, the following :—"In this course there are seven Honour Departments : I. Latin and Greek ; II. Mathematics ; III. Physics ; IV. English, German and French, with either Italian or Spanish ; V. Chemistry, Biology, and Mineralogy, and Geology ; VI. Mental and Moral Science ; VII. Greek and Oriental Languages ;" and making such other changes in the regulations as the adoption of this amendment would render necessary ;

On motion of Dr. Wilson, seconded by Prof. Chapman, The report of the Committee on Matriculation and Teachers' Examinations, presented at last meeting of the Senate, was adopted.

In continuing the debate on the report of the Committee on Senate procedure, it was moved by Mr. Kingsford, seconded by Mr. King, and carried, That the report be considered clause by clause.

Clause I. The sessional year of the Senate shall commence with the 1st of October in each year.

Clause II. Regular meetings shall be held on the second Thursday in November and December, in the first term, and on the second Thursday in March and April, in the second term.

Moved in amendment by Prof. Loudon, seconded by Prof. Galbraith, That the Senate is prepared to try the experiment of holding continuous sessions on second Thursdays in March, April, November, and December, on the understanding that meetings shall be called as hitherto, whenever, in the opinion of the Vice-Chancellor, they should be required, with due notice of all business to be introduced.

The amendment was lost, and the clause adopted.

The following clauses were adopted :

III. Meetings for the adoption of reports on Examinations and for matters connected with such reports, or arising therefrom, shall be called by the Chancellor or Vice-Chancellor when necessary.

IV. All meetings shall commence at eight o'clock in the evening, except when otherwise determined by special resolution of the Senate, and may be continued on adjournment, provided that the meeting of the Senate on Commencement Day shall be held as heretofore.

V. Special meetings shall be called at any time when the Chancellor or Vice-Chancellor deems it necessary, or on the requisition of any ten members of the Senate ; but at such meetings no matters shall be discussed except those mentioned in the requisition.

VI. Any member having any matter which he desires to bring up, shall be entitled to have his notice of motion printed in the notice calling the Senate together, provided that no notice so to be printed shall exceed fifty words, and provided that such notice be delivered to the Registrar, or mailed to him, at least fifteen days before the day fixed for the next meeting of the Senate.

VII. All summonses for regular meetings shall be sent through the post office to each member, at least ten days before the day of meeting, and those for special meetings shall specify the business which is to be brought forward.

VIII. All summonses must be issued by the Registrar, under the direction of the Chancellor or Vice-Chancellor.

IX. At least one day's notice must be given of every motion, except those for the suspension of a rule or for adjournment.

The Senate adjourned to Friday, March 12th, at 8 p.m.

DAN. WILSON
Chairman.

Minutes of a meeting of the Senate, held in the Senate Chamber, March 12th, 1886.

Present :—Dr. Wilson (in the Chair), Mr. Moss, Mr. Dickson, Dr. Fulton, Rev. M. Wolverton, Rev. Father Vincent, Rev. Dr. Castle, Rev. Dr. Sheraton, Mr. Millar, Mr. Embree, Dr. Larratt Smith, Prof. Chapman, Prof. Hutton, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Mr. Houston, Dr. Richardson, Mr. Macbeth, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Mr. King, Dr. McFarlane, Mr. Woods, Rev. Dr. Caven, Rev. D. J. Macdonnell.

Mr. Millar gave notice that, at the next meeting of the Senate, he would move that the Board of Arts Studies be requested to consider the resolutions of the High School Masters forwarded last year to the Senate, and to report upon the same at an early date, with the exception of any upon which action has already been taken by this body.

On motion of Mr. Houston, seconded by Mr. Woods, the Senate went into Committee of the whole, on the Report of the Committee on Senate Procedure.

The following clauses were adopted :—

X. No statute shall be introduced without one day's notice ; nor shall it be passed at the same sitting at which it has been first read, but it shall be read a second time at another sitting on a subsequent day.

XI. At the second reading of a statute, any member may require it to be read clause by clause, and the vote to be taken on each.

XII. The order of proceedings at meetings shall be :—

(1) Reading the Minutes.
(2) Reading of Communications received since last meeting.
(3) Notices of Motion, or of intention to introduce statutes.
(4) Reports of Committees, according to priority of appointment.
(5) Business remaining since last meeting.
(6) Motions.
(7) Statutes.

XIII. In all unprovided cases, the rules of order and debate shall be the rules, usages, and forms of the Legislative Assembly of Ontario.

The following clauses were lost:—

XIV. All statutes, as soon as assented to by the Lieutenant-Governor in Council, shall be printed and distributed to the members of the Senate by the Registrar unless such printing be despensed with by the Senate.

XV. The Registrar shall report all meetings to the press, and his report shall, unless the Senate otherwise orders, include all notices of motions, motions, amendments, questions with replies, and divisions.

The following clause was withdrawn:—

XVI. Statutes 2, 5, 73, 95, 100, 135, are hereby repealed.

The Committee rose and reported, and the report was adopted in the preceding form, on motion of Mr. Kingsford, seconded by Mr. King.

On motion of Dr. Caven, seconded by Mr. Coyne, the following resolution was adopted:—

That the Report now adopted shall be acted on for one year before these provisions shall be reduced to the form of statutes.

On motion of Mr. Millar, seconded by Mr. Houston, it was decided that when the Senate adjourned, it should stand adjourned until 2 o'clock of Saturday, March 13th.

Mr. Houston moved, seconded by Mr. Kingsford, the second reading of his (Mr. Houston's) statute respecting English in the Arts Course.

Moved in amendment by Mr. Millar, seconded by Mr. Embree, that the statute be not now read a second time, but that the Board of Arts Studies be requested to consider and report at an early date upon, The expediency of complying with the wishes of the High School Masters as expressed in the resolution transmitted to this Senate to the effect: 1. That Chaucer should be removed from the First Years' Examinations to a later stage in the Curriculum, and be replaced by some modern author; 2. That English prose should receive due recognition in the English Course of the University; 3. That the study of the earlier forms of the language should be provided for in the later years.

Moved in amendment to the amendment by Prof. Loudon, seconded by Dr. Larratt Smith, That the Senate is of opinion that Mr. Houston's proposed scheme embraces so large an additional amount of work in the Department of Modern Languages as to preclude the possibility of its being properly overtaken, and is thereby calculated to encourage superficiality and discountenance sound learning; and resolves that the motion for the second reading of the statute to give effect to the said scheme be refused.

At Mr. Houston's request the Senate allowed the withdrawal of the motion, and in consequence the amendments were withdrawn.

Mr. Houston moved, seconded by Mr. Wolverton, the second reading of his (Mr. Houston's) statute, respecting Civil Polity in the Arts Course.

At Mr. Houston's request the Senate allowed the withdrawal of this motion.

The Senate adjourned to Saturday, March 13th, at 2 p.m.

DAN. WILSON,
Chairman.

Minutes of a meeting of the Senate held in the Senate Chamber, March 13th, 1886.

Present:—Dr. Wilson (in the chair), Mr. Dickson, Rev. Dr. Castle, Rev. Dr. Sheraton, Mr. Millar, Mr. Embree, Prof. Chapman, Prof. Hutton, Prof. Galbraith, Mr. Houston, Dr. Richardson, Mr. Coyne, Mr. Kingsford, Mr. King, Principal Woods, Rev. Dr. Caven.

Moved by Mr. Houston, seconded by Mr. Millar, That since Scholarships and Medals heretofore maintained as a charge on the public revenue of the University have been abolished in the Second, Third and Fourth Years in the Faculty of Arts, it is expedient to abolish Scholarships and Medals not on private foundations in the same years in the Faculties of Law and Medicine respectively.—*Lost.*

Moved by Mr. Houston, seconded by Mr. Coyne, That the question of the establishment of a Department of Oriental Languages be considered at this stage in the proceedings.—*Lost.*

Moved by Mr. Houston, seconded by Mr. Millar, That with a view to promote the interests of the University by giving greater publicity to the proceedings of the Senate, and in compliance with the repeated requests of Convocation, it is expedient to conduct the ordinary business of the Senate with open doors.—*Lost.*

Moved by Dr. Richardson, seconded by Dr. Caven, and carried, That Mr. Kingsford, Mr. King and Dr. Wilson, be a Committee to draft a letter of explanation to Convocation relative to the present mode of reporting the proceedings of the Senate.

On motion of Dr. Richardson, seconded by Mr. Houston, Mr. Houston's notice of motion respecting the adoption at University Examinations of certain orthographical rules was discharged.

Moved by Mr. Houston, seconded by Dr. Sheraton, That it is expedient to create in the Arts Curriculum an Honour Graduating Department entitled "Greek and Oriental Languages."

Moved in amendment by Mr. King, seconded by Dr. Caven, That without committing itself to anything in Mr. Houston's motion as to creating a Department in Greek and Oriental Languages, the Senate is willing that the subject matter of such motion be referred to a special Committee to report to the Senate thereon, said Committee to be composed of Dr. Wilson, Principals Caven, Castle, and Sheraton, Profs. Loudon and Hutton, and Messrs. Woods, Gibson, Houston and the mover.

The amendment was adopted.

On motion of Mr. Kingsford, seconded by Mr. Embree, Mr. Kingsford's motion respecting Options, of which notice was given March 12th, was referred to a Committee consisting of Dr. Wilson, Prof. Loudon, Prof. Hutton, Messrs. Embree, Houston, King, Millar, Woods, Coyne and the mover.

On motion of Mr. Kingsford, seconded by Mr. King, Mr. Kingsford's motion respecting a Law School for the Province, of which notice was given March 12th, was referred to a Committee consisting of the Vice-Chancellor, Mr. Moss, Dr. Larratt Smith, Mr. Coyne, Mr. King, Mr. Foster, Mr. Falconbridge, Mr. Macbeth and Mr. Mortimer Clark.

Moved by Dr. Wilson, seconded by Mr. Woods, and resolved, That it be referred to a Committee consisting of Prof. Loudon, Prof. Hutton, Dr. Wilson and Dr. Caven, to report as to the number of classes in Honours and the percentages required under the new system of arranging alphabetically in Honours.

The Senate adjourned to the second Thursday in April.

DAN. WILSON,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, April 8th, 1885

Present:—Dr. Wilson (in the chair,) Dr. Fulton, Rev. Father Vincent, Rev. Dr. Sheraton, Mr. Mortimer Clarke, Mr. Embree, Prof. Chapman, Prof. Hutton. Mr. Falconbridge, Prof. Galbraith, Dr. Oldright, Mr. Houston, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Principal Woods.

Dr. Wilson presented the following report of the Committee on percentages, and gave notice that at the next meeting of the Senate, he would move its adoption.

To the Senate, etc.:

GENTLEMEN,—Your Committee on Honour Classes and Percentages in the Fourth Year find that, on November 30th, 1883, the following resolution was adopted:—

"That at the Examination for the Degree of B.A., Honour candidates shall be arranged in three Classes, the minima for which shall be 75, 66 and 50 per cent. respectively, and no Medals shall be awarded at such Examinations."

Your Committee are of opinion that this resolution comes into force with the introduction of the new curriculum, viz., in 1886.

All which is respectfully submitted.

DAN. WILSON,
Chairman.

April 8th, 1886.

Moved by Mr. Houston, seconded by Mr. Coyne, That it is expedient to make the work for Matriculation and First Year in Law, identical with the work for Matriculation and First year in the Faculty of Arts.—*Lost.*

Moved by Mr. Houston, seconded by Mr. Embree, That it is expedient to allow those candidates for Honours in Modern Languages, who take both Italian and Spanish, to dispense with Honour History in the Second and Third Years, and with Ethnology in the Fourth Year.

Lost on the following division :—

Yeas.—Messrs. Houston, Embree, Dr. Oldright—3.

Nays.—Messrs. Falconbridge, Clarke, Woods, Coyne, Kingsford, Professors Chapman, Loudon, Hutton, Galbraith, Father Vincent—10.

On motion of Dr. Wilson, seconded by Prof. Loudon, Rev. Father Vincent was added to the Committee on Oriental Languages and Greek.

In Mr. Millar's absence, Mr. Coyne moved, seconded by Mr. Embree, That the Board of Arts Studies be requested to consider the resolutions of the High School Masters, forwarded last year to the Senate, and to report upon the same at an early date, with the exception of any upon which action has already been taken by this body.—*Carried.*

Mr. Houston moved, That a special Committee consisting of Messrs. Wolverton, Macdonnell, Millar, Embree, and the mover, be appointed, with instructions to ascertain and report to the Senate what steps have been taken by governments, universities, colleges, or learned societies, to secure the general introduction of a simpler and more phonetic system of spelling English words than the one at present in force.

The motion was ruled out of order.

The Senate adjourned to Friday, April 9th, at 8 p.m.

DAN. WILSON,
Chairman

Minutes of a meeting of the Senate, held in the Senate Chamber, April 9th, 1886.

Present :—Dr. Wilson (in the chair), Dr. Fulton, Rev. Dr. Sheraton, Mr. Mortimer Clark, Mr. Embree, Prof. Chapman, Prof. Hutton, Mr. Falconbridge, Mr. Foster, Prof. Galbraith, Mr. Houston, Prof. Loudon, Mr. Coyne, Mr. Kingsford, Mr. Woods, Dr. McFarlane.

Dr. Wilson presented the report of the Committees on Oriental Literature, which was received on motion of Dr. Wilson, seconded by Principal Woods, and ordered to be printed.

The report of the Committee on Percentages, presented at the last meeting of the Senate, was adopted on motion of Dr. Wilson, seconded by Prof. Loudon.

Moved by Mr. Houston, seconded by Prof. Hutton, That it is expedient to allow candidates for Honours in Mental and Moral Science to substitute for the Pass and Honour work in the Civil Polity, in the Third and Fourth Years, the Pass and Honour work in any of the following subjects :—(1) English, (2) French, (3) German, (4) Latin, (5) Greek, (6) Hebrew, (7) History and Ethnology.

Moved in amendment by Mr. Kingsford, Seconded by Dr. Sheraton, and carried, That Mr. Houston's motion be referrrd to the Committee on Options already appointed.

Dr. Fulton moved the first reading of his statute proposing to make certain changes in the Medical Curriculum, seconded by Mr. Houston.

The motion was ruled out of order, as relating to matter that had already been disposed of in the year.

Mr. Kingsford's statute, suspending certain statutes for a year, was discharged.

Moved by Prof. Chapman, seconded by Principal Woods, and carried, That it be a recommendation to the Committee on Examinations that no one be appointed an Examiner in Natural Science who does not hold some official position in connection with some branch of that Department, or who has not published some work or scientific paper on the subject.

On motion of Mr. Kingsford, seconded by Mr. Falconbridge, Mr. Kingsford's motion respecting the appointment of an Examiner in Spanish was referred to the Committee on Examinations.

Moved by Mr. Kingsford, seconded by Mr. Coyne, That the Committee on Applications and Memorials have power to decide finally on applications to modify restrictions imposed by the Curriculum of 1885, received during the remainder of the current University year.

Moved in amendment by Prof. Loudon, seconded by Dr. Fulton, That it is unwise to delegate the powers of the Senate, with respect to applications from students to the Committee on Applications and Memorials.

The amendment was adopted on the following division :—

Yeas.—Messrs. Woods, Loudon, Clark, Fulton, Galbraith, Foster, Falconbridge, Chapman—8.

Nays.—Messrs. Hutton, Coyne, Embree, Houston, Kingsford—5.

The Senate adjourned.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, May 11th, 1886.

Present :—Dr. Wilson (in the Chair), Prof. Hutton, Dr. Richardson, Dr. Oldright, Mr. King, Mr. Falconbridge, Mr. O'Sullivan.

Dr. Wilson presented the following report of the scrutineers appointed to act at the Senate Election for 1886 :—

To the Senate, etc. :

GENTLEMEN,—The undersigned scrutineers, appointed to act at the counting of votes cast during the election of members of the Senate for 1886, have the honour to report as follows :—

To represent convocation on the Senate, Wm. Glenholme Falconbridge, M.A., Q.C., Adam Henry Wright, B.A., M.B., and William Alexander Foster, LL.B., Q.C., were elected, the vote cast being as follows :—

Mr. Falconbridge	540
Dr. Adam Wright	519
Mr. Foster	394
Mr. J. A. Culham	319
Mr. E. B. Edwards	228
Dr. M. J. Kelly	159
Mr. T. Hodgins	116

To represent the legally qualified High School Teachers of Ontario on the Senate Mr. John Millar, B.A., was elected, the vote standing :—

Mr. Millar	84
Mr. McMurchy	3
Mr. Spotten	2
Mr. Oliver	1
Mr. J. Morgan	1
Mr. A. Purslow	1

All which is respectfully submitted.

May 5th, 1886.

DANIEL WILSON,
Chairman.

W. T. BOYD,
T. C. MILLIGAN, } Scrutineers.

On motion of Mr. King, seconded by Mr. Falconbridge, it was decided that a special convocation for conferring Degrees and Honours in Medicine, be held in the Library of the University on Saturday, May 15th, at 3 p.m.; and that Dr. Wilson act in the stead of the Vice-Chancellor in the event of his being absent.

The Senate adjourned to Saturday, May 15th, at 3 p.m.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, May 15th, 1886.

The Senate assembled in the Senate Chamber, and proceeded to the Library, where Degrees in Medicine were conferred and other proceedings had, as appears of record in the Book of Convocation.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, June 4th, 1886.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. King, Mr. Kingsford, Mr. Falconbridge, Mr. Foster, Dr. Caven.

Dr. Wilson gave notice that, at the next meeting of the Senate, he would move that the report on Oriental Languages be received and adopted, and that he would introduce and move the first reading of a statute for creating a department in Oriental Languages.

The Senate adjourned to Wednesday, June 9th, at 2 p.m.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate of June 9th, 1886.

The Senate adjourned to the Convocation Hall, where degrees were conferred and other proceedings had, as appears of record in the Book of Convocation.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate held in the Senate Chamber, July 16th, 1886.

Present :—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Dr. Oldright, Mr. Houston, Rev. Dr. Caven.

Dr. Wilson presented the following report of the Committee on Oriental Languages and Literature:

To the Senate, etc. :—

GENTLEMEN,—The joint Committee of the Board of Arts Studies and the members named for the consideration of the scheme of a revised course of work in Oriental Languages, and to report a scheme for a separate department in Oriental Languages, beg leave to report the scheme of Pass work as here finally revised, and to submit in addition the following for the department of Oriental Languages, which they propose shall be printed with a view to its consideration at a subsequent meeting.

All of which is respectfully reported.

DANIEL WILSON,
Chairman.

University College, 4th June, 1886.

DEPARTMENT OF ORIENTAL LANGUAGES.

Pass Course.

FIRST YEAR.

Essentials of Hebrew Grammar.
Genesis i., ii., iii., xxiv., xxxvii., xlii. Exodus xx., xxxii. Numbers xxiii. 1 Samuel xvii. 2 Samuel xiv.
Translation of easy sentences from English into Hebrew.
Gesenius' Grammar (Mitchell).

SECOND YEAR.

Grammar continued. Word formation and Syntax more fully treated.
Psalms i., ii., viii., xix., xxiii. 1 Kings v-viii. 2 Kings xviii., xix. Hosea iv., v. Amos v., vi. Isaiah i-vi., xiii., xiv.
Translation of easy passages at sight.
Exercises in Hebrew Composition.

THIRD YEAR.

Isaiah xl., lii-lv., lx., lxiii. Jeremiah xxi., xxv. Ezekiel i., ii. Micah v. Nahum iii.
Translation at sight and Composition continued.
Hirschfelder's Hebrew Poetry.
Chaldee Grammar: Paradigms in Baer's Text of Daniel and Ezra. Daniel ii., iii.

FOURTH YEAR.

Psalms xlv., xliii., xc., cxxi.-cxxvii., cxxxix. Proverbs i.-viii., xvi., xxv. Job iii., iv., xix., xxviii. Ecclesiastes xii. Lamentations iii. Nehemiah i., viii.
Exercises continued.

The Committee beg leave further to recommend that the regulation, clause 4, on page 3 of the curriculum be amended so as to read: "Each Undergraduate is required to take two examinations in French, or in German, or in Hebrew;" and that on page 4 the words within brackets, "(Oriental Languages are accepted as an alternative.)" be omitted.

Honour Course.

SECOND YEAR.

General introduction to Shemitic languages, literature, and history.

Hebrew: Outlines of Hebrew literature. Historical prose:—Exodus xxi., xxiii. Leviticus xxvi. Numbers xxi., xxii. Deuteronomy viii. Joshua ix. Judges xiv., xvi. 1 Samuel xix., xx. 2 Samuel xviii., xix. 1 Kings xvii.-xix. 2 Kings iv.-vi., xvi., xvii. 2 Chronicles xxix., xxx. Ezra i., iii. Nehemiah iv. Esther i. Ruth.

Exercises to illustrate the vocabulary and syntax. Translation at sight.

Aramaic: Introduction to the Aramaic dialects. *Targumic:* Winer's Grammar by Riggs, with Chrestomathy.

Syriac: Essentials of the Grammar (Uhlemann translated by Hutchinson, or Phillips). Texts in Roediger's Chrestomathia Syriaca.

THIRD YEAR.

Hebrew : Prophetical literature : Isaiah xxv., xxviii., xxxii., xxxv : xli.-xlix. Jeremiah xiv.-xvii. Ezekiel xxvi., xxvii., xxxi. Joel ii. Micah vi. Zephaniah iii. Haggai ii. Zechariah iii., iv. Malachi iii., iv.

Exercises in composition especially for the use of the tenses. Translation at sight.

Arabic : Socin's Arabic Grammar with Reading Book and Exercises.

Or, *Assyrian :* Lyon's Assyrian Manual. Delitzch's Assyrische Lesestuecke.

FOURTH YEAR.

Hebrew : Poetical literature. Psalms xviii., xxii., xxxiv., xlii., li., lv., lxviii., lxxii., lxxviii , lxxxvii., xci., ciii., civ., cx., cxxx., cxxxvii., cxlv., cl. Proverbs x., xi., xiv., xv. xxviii.-xxxi. Job xiv., xxiii., xxix., xxx., xxxviii.-xli. Canticles ii., iii. Genesis xlix. Deut. xxxii. Eccles. iii., xi.

Exercises in composition. Translation at sight.

Arabic : Koran Suras i., ii. Texts in Beyrut Chrestomathie, with use of the Beyrut Vocabulaire Arabe-Français.

Or, *Assyrian :* Cuneiform Inscriptions of Western Asia, selections from vols. i. and v. Haupt's Akkadische und Sumerische Keilschrifttexte, selections from parts ii. and iii.

Additional Studies.

FIRST YEAR :
- Pass Latin and Greek.
- ——French or German, (German recommended.)
- ——Mathematics.
- ——English.
- ——Hebrew.

SECOND YEAR :
- Pass Latin or Greek.
- ——Physics.
- ——History.
- ——French or German.
- ——Mental Science and Logic.

THIRD YEAR :
- Pass Latin, or Greek, or French, or German.
- ——English or History.
- ——Mental Science.

FOURTH YEAR : Pass Latin, or Greek, or French, or German.

Moved by Dr. Wilson, seconded by Dr. Caven, and carried,—That the report on the Department of Oriental Languages be received and that the Senate adopt the scheme therein set forth for a Pass and Honour Course ; and for the formation of a Department of Oriental Languages, with the requisite additional studies.

On the same moving and seconding, the Statute embodying the scheme set forth in the report was read a first time.

The Senate adjourned to the meeting at which the report on the Matriculation Examinations will be presented.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, July 27th, 1886:

Present:—Dr. Wilson (in the chair), Dr. Oldright, Mr. Houston, Mr. Foster, Rev. Dr. Caven.

On motion of Dr. Oldright, seconded by Mr. Foster, the following Statute was read a first time:—

By the Senate, etc.:

Be it enacted, That undergraduates below the standing of the Fourth Year, pursuing the Honour Course, who have been rejected in any of their Pass subjects, or who have been prevented from presenting themselves for examination in these subjects by sickness, domestic affliction or other causes beyond their control, may on application to the Senate be permitted to present themselves for examination in September, at the time of the Senior Matriculation Examinations.

The Senate adjourned.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a special meeting of the Senate, held in the Senate Chamber, September 10th, 1886.

Present:—The Vice-Chancellor (Mr. Mulock), Mr. Moss, Mr. Dickson, Rev. Father Vincent, Dr. Castle, Mr. Mortimer Clark, Mr. Embree, Dr. Oldright, Mr. Houston, Mr. Kingsford, Dr. McFarlane, Dr. Adam Wright, Mr. Foster, Dr. Caven, Mr. O'Sullivan.

The requisition, in compliance with which the meeting was called, was read.

Moved by Mr. Embree, seconded by Mr. Dickson, and resolved, That the "Merchant of Venice" be substituted for "Timon of Athens" in Junior Matriculation work for Honors and the First Year Pass work for 1887.

The Senate adjourned to October 1st, to receive the report on the Supplemental Examinations.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, October 1st, 1887.

Present:—Dr. Wilson (in the chair), Mr. Moss, Mr. Houston, Mr. O'Sullivan, Dr. Caven.

The Senate adjourned.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 11th, 1886.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Dr. Sheraton, Dr. Castle, Mr. Mortimer Clark, Mr. Dickson, Mr. Embree, Mr. Millar, Prof. Hutton, Mr. Houston, Mr. King, Mr. Woods, Mr. McMaster, Dr. Caven.

The minutes of meetings of the Senate held since April 8th were confirmed.

Letters were read from—

Mr. J. E. Wetherell, Secretary of the High School section of the Ontario Teachers' Association, conveying resolutions adopted by that body.

Mr. R. W. Doan, Secretary Ontario Teachers' Association, conveying resolutions adopted by that body.

Mons. A. K. Laflame, Secretary of Laval University, informing the Senate of the conferment of the Degree LL.D., by Laval University, on Mr. D. A. O'Sullivan.

Moved by the Vice-Chancellor, seconded by Dr. Wilson, and carried, That the letter from the Education Department relative to the Gilchrist Scholarship be referred to a Committee to consist of Dr. Caven, Mr. Embree, Father Vincent, Dr. Castle, Dr. Sheraton, Mr. Dickson and the seconder, to report on the subject to the Senate at its December session.

Moved by Mr. Embree, seconded by Mr. Dickson, That the Honour work in Classics for Junior Matriculation be made the same as the Pass work in Classics for the First Year.—*Allowed to stand.*

Moved by Mr. Embree, seconded by Mr. Millar, That the selections from Cowper for 1888 be as follows: The Task, B. IV.; Lines on receipt of my Mother's Picture; John Gilpin; The Castaway; and such other of the author's minor poems as, together with those mentioned, will be an equivalent for the Third Book of the Task; That the selections from Byron for 1890 be Childe Harold's Pilgrimage, Canto III., and the Prisoner of Chillon, or such of the author's minor poems as will be an equivalent.—*Withdrawn.*

Moved by Mr. Embree, seconded by Mr. Dickson, that the following motions:—

"That the same principle that is now applied to the classification of Honour candidates in the Fourth Year, be also applied to the classification of Pass candidates in all the University Examinations.

"That the terms 'special' and 'general' be substituted for 'pass' and 'honour' in describing the courses taken by students of this University."

be referred to a Special Committee, to be composed of Dr. Wilson, Prof. Hutton, Prof. Galbraith, Dr. Castle, Principal Woods, and the mover and seconder.—*Carried.*

On Motion of Mr Embree, seconded by Mr. Houston, the following was referred to the Board of Art Studies:—

That First Class Teachers' Certificates be accepted *pro tanto* in lieu of the Senior Matriculation or First Year Examination, and that teachers holding grades A and B be allowed Honour standing in the first or second class respectively, in the subjects or courses in which those certificates are taken.

The Senate adjourned to Friday, November 12th, at 8 p.m.

Confirmed.

W. MULOCK,
Vic-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, November 12th, 1886.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Dr. Sheraton, Mr. Millar, Mr. Embree, Prof. Hutton, Prof. Galbraith, Dr Oldright, Mr. Houston, Mr. King, Mr. Falconbridge, Dr. Adam Wright.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move, That English Texts by authors prior to Chaucer, including selections from the Anglo-Saxon, should form part of the course for Honours in the Third and Fourth Years.

Also, That a Graduating Department be created, which shall include Latin and the Romance Languages, with such additional subjects as will make it a fair equivalent for the present Graduating Departments of Classics and Modern Languages respectively.

Mr. Millar gave notice that, at the next meeting of the Senate, he would move, That the post office addresses of each graduate of the University, so far as can be ascertained, be published with the Examination papers of each year, or with the curriculum.

Moved by Dr. Sheraton, seconded by Mr. King, and carried, That the Senate approve of the proposed year book, and recommend the Board of Trustees to grant the sum of fifty dollars towards the expense, and in return fifty copies will be taken by the University;

and that before publication, the proofs be duly submitted to the Vice-Chancellor, Dr. Wilson, and the Registrar.

Moved by Dr. Wilson, seconded by Mr. Millar, and carried, That the Registrar be requested to communicate with the Attorney General, in reference to the foundation stone of King's College, now in process of demolition; with a view that the bottle with the documents and other contents deposited at the time of the laying of the foundation stone of the College, be placed along with such other objects as may be deposited in the foundation of the new Legislative buildings, about to be erected on the site, as a memorial of its original destination as the site of the University buildings.

Moved by Mr. Houston, seconded by Mr. King, and carried, That a special committee consisting of the Chancellor, Vice-Chancellor, Hon. J. A. Boyd, Drs. Wilson and Oldright, and Messrs. Moss, Kingsford, King, Falconbridge and Houston, be appointed with instructions to report what changes, if any, it may be expedient to make in the Arts Course under the head of Civil Polity, and also in the conditions on which the Blake Scholarship is offered for competition.

Moved by Mr. Houston, seconded by Mr. Millar, That wherever English is prescribed as part of the Pass Course in the Arts Curriculum, it shall include the critical reading of prose texts for rhetorical purposes.—*Lost.*

On motion of Dr. Oldright, seconded by Dr. Wilson, the Statute relating to Fourth Year Honour Men, received its second reading and passed.

The Senate adjourned to the second Thursday in December.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, December 9th, 1886.

Present:—The Vice-Chancellor, (Mr. Mulock), Mr. Moss, Dr. Sheraton, Dr. Castle, Mr. Clark, Mr. Embree, Prof. Hutton, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Falconbridge, Dr. Adam Wright, Mr. Foster, Dr. Caven, Rev. D. J. Macdonnell, Dr. O'Sullivan.

The minutes of last meeting were read and confirmed.

The following report of the Committee appointed to consider the letter relative to the Gilchrist Scholarships was presented and adopted on motion of Dr. Caven, seconded by Dr. Sheraton:—

To the Senate, etc:

GENTLEMEN,—The Committee to whom were referred the enquiries of the Gilchrist Scholarship Trustees forwarded for the consideration of the Senate of the University of Toronto, by the Minister of Education, beg leave to report:

The Secretary of the Gilchrist Educational Trust, in his letter to the Colonial Office, refers to the fact that the Gilchrist Scholarships "have not attracted that interest which might have been expected, and that their result, in an educational point of view, has not been equivalent to the expense at which they are maintained."

The Trustees accordingly invite an expression of opinion as to changes that may be desirable.

The fact that the Gilchrist Scholarships have hitherto been offered for competition among Canadian youths of the standing of those about to enter on an undergraduate course, has necessarily prevented the authorities of Canadian universities from taking an interest in them. It is not only at variance with the interests of the colleges and universities of Canada to induce its most promising youths to go elsewhere for higher education, but your Committee believe it to be undesirable in their own interests, as well as in that of Canada, that they should spend the important years of their undergraduate course in another country, and form their early friendships, apart from the scenes where their life is to be spent.

Your Committee beg leave, therefore, to report that in order to render the Gilchrist Scholarships of value as an aid to high scholarship among Canadians, they should be converted into post-graduate scholarships; either to be competed for among graduates of Canadian universities of the standing of not more than three years from taking their B.A. degree, or to be placed by rotation at the disposal of certain selected Canadian universities, for competition among their own graduates as postgraduate scholarships.

Taking in order the several points specified in the letter of the Gilchrist Educational Trust:

1. "As to the amount of such Scholarships, and their length of tenure."

The present annual value of £100 sterling, though an acceptable aid to any student desiring to avail himself of the advantages of British or foreign universities, is inadequate to meet all expenses. If the fund admit of a larger amount being devoted to the object, it would undoubtedly make the scholarship more widely available for deserving candidates. As to the length of tenure, the present term of three years appears to be adequate.

2. "At what institutions they should be held?"

In reference to this, your Committee believe that the present limitation compelling attendance either at University College, London, or at Edinburgh University, too restricted; and they would recommend that of a period extending over two or three years, the scholar should be left free to make choice of any British or foreign university, or, if that be considered too ample a discretion, that a much wider choice than heretofore be allowed; and that part of the time may be passed at some foreign university.

3. "The limits of age of the candidates?"

If the previous recommendation of restricting the competition to graduates of Canadian universities be adopted, it may suffice to fix the limit to candidates of not more than three years from the date of admission to the degree of B.A.

4. "The character of the competitive examinations upon which they should be awarded?"

If the suggestion of offering them for competition among the graduates of certain specified Canadian universities meet with favourable consideration by the Gilchrist Trust, it might be well after naming the universities, to ask them to agree upon a joint report as to a bases of competitive examination to be submitted for the approval of the Trustees.

If on the other hand, it were thought well to place the scholarship by rotation at the disposal of the selected universities, it might suffice to leave to each to submit its own scheme and requirements for the consideration of the Trust.

5. "The conditions on which they should be held?"

The successful candidate should be required to study for a specified number of terms at one or other of the universities of the Mother Country, or of certain prescribed foreign universities, and to produce at the close of each term or Academic year satisfactory evidence, in accordance with the system of the university or college at which he has studied, that he has diligently and successfully prosecuted the work undertaken by him.

6. "In what manner, if instituted, they could be kept under the supervision and control of the Gilchrist Trustees?"

The Examination papers and any specified requirements for practical examination might be referred to the Trustees, along with the names of proposed Examiners, for their approval; and the answers could be sent to them, with the reports of the Examiners, for their confirmation. The suggestions already offered assume the final reference of all details to the Gilchrist Trust; and any conditions they may require with a view to securing to them their legitimate control of the examinations, will be acceptable to Canadian universities.

By such modifications of the plan on which the Gilchrist Scholarships are now instituted as are here suggested, your Committee believe that they might become a valuable aid to Canadian scholarship; and supply in some degree an equivalent of the travelling scholarships, or fellowships, which are already in existence in other universities,

both in Europe, and in one or two of the oldest universities of the United States, and which are regarded as valuable aids and incentives to higher education.

All which is reported.

DANIEL WILSON,
Convener.

Toronto, December 9th, 1886.

On motion of Dr. Sheraton, seconded by Dr. Caven, Mr. Mulock was unanimously elected Vice-Chancellor for the ensuing two years.

The Senate adjourned.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, March 10th, 1887.

Present :—The Minister of Education (Hon. G. W. Ross), the Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Dickson, Rev. Father Vincent, Rev. Dr. Sheraton, Mr. Millar, Mr. Embree, Prof. Hutton, Prof. Galbraith, Dr. Oldright, Mr. Houston, Dr. McFarlane, Dr. Adam Wright, Rev. D. J. Macdonnell, Dr. O'Sullivan.

The minutes of last meeting were read and confirmed.

The Vice-Chancellor presented the following report of the Committee on classification of Pass candidates :—

To the Senate, etc. :

GENTLEMEN,—The Committee to whom was referred the consideration of the proposal to apply the classification of Honour candidates of the Fourth Year to the classification of Pass candidates, beg leave to report that they recommend :

1. That the terms "General" and "Special" be substituted for "Pass" and "Honour" in describing the courses taken by undergraduates.

2. That all candidates in the General Course shall be classed in each subject in three grades, and that the precentages shall be 66, 50, and 33.

All of which is respectfully submitted.

DANIEL WILSON,
Chairman.

February 19th, 1887.

The Vice-Chancellor presented the following report of the Board of Arts Studies :—

To the Senate, etc. :

GENTLEMEN,—Your Board of Arts Studies beg to make the following recommendations :

1. That on page 15 of the Arts Curriculum "Livy II." be read for "Livy I." in the Latin prescribed for 1888.

2. That First Class Teachers' Certificates be accepted *pro tanto*, in lieu of the Senior Matriculation or First Year examination ; and that teachers holding Grades A and B be allowed the options granted to Honour men in the subjects or courses in which those certificates are granted.

3. In respect to the petition of certain undergraduates in the Department of Modern Languages, asking that History and Ethnology be made optional, or be alternatives for Italian and Spanish,—that the present curriculum be adhered to.

All which is respectfully submitted.

DANIEL WILSON,
Chairman.

February 19th, 1887.

Mr. Houston gave notice that, at the next meeting of the Senate, he would move that it is expedient to print the University Curriculum annually, and to append to it a calendar shewing the dates of all university meetings for the year.

Moved by Prof. Galbraith, seconded by Prof. Hutton, and carried, That a Committee of members of the Senate, consisting of Dr. Wilson, Mr. Millar, Prof. Hutton, Mr. Embree, Dr. Adam Wright, and Mr. Houston, be appointed to consider such modifications in the Matriculation Examinations of the University as would render it more suitable for adoption as a basis for the Departmental Examinations for teachers.

The Senate adjourned to Friday, March 11th.

DANIEL WILSON,
Chairman.

MINUTES of a meeting of the Senate, held in the Senate Chamber, March 11th, 1887.

Present:—Dr. Wilson (in the chair), Mr. Dickson, Rev. Father Vincent, Dr. Sheraton, Dr. Castle, Mr. Millar, Mr. Embree, Prof. Hutton, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Kingsford, Mr. King, Dr. McFarlane, Mr. Falconbridge, Dr. Adam Wright, Dr. Caven, Hon. Wm. McMaster, Rev. D. J. Macdonnell.

Moved by Dr. Oldright, seconded by the Rev. D. J. Macdonnell, That the letters from Victoria and Queen's Universities relative to a joint University Matriculation Examination be referred to a Special Committee consisting of Dr. Wilson, Mr. Embree, Mr. Millar, Prof. Hutton and Mr. Houston.—*Carried.*

Moved by Mr. Embree, seconded by Prof. Hutton, That the report of the Committee on the classification of Pass candidates, presented at the last meeting of the Senate, be adopted.

Moved in amendment by Mr. Kingsford, seconded by Mr. King, that the report be referred back to the Committee.

The amendment was adopted.

Moved by Prof. Hutton, seconded by Mr. Miller, That the report of the Board of Arts Studies, presented at the last meeting of the Senate, be adopted.—*Carried.*

The following report of the Special Committee on the amalgamation of Matriculation and Teachers' Examinations was adopted on motion of Prof. Hutton, seconded by Mr. Millar:—

To the Senate, etc.:

GENTLEMEN,—The Committee recommend the adoption of the scheme proposed by the Department, calling attention to the following points:

(1) Four papers on Greek, not included in the Departmental work, are set by the University in the Junior Matriculation Examination as alternatives to German and French. These papers to be set as hitherto.

(2) The Committee recommend with regard to the papers set in Botany: (*a*) That the Senate adopt the Botany prescribed by the Department (as below) in place of the more general course hitherto recognized by the University Curriculum (page 11).

14. *Botany.*—The elements of structural Botany, including systematic examinations of common plants selected to show variety of structure in the different organs; true nature of the parts of the flowers; various forms of roots, structure and uses, how distinguished from underground stems; various forms of stems, bulbs and tubers, herbs, shrubs and trees; nature and position of buds; forms and disposition of foliage leaves; kinds of inflorescence, special forms of flower leaves, morphology of the calyx, corolla, stamens, and pistil; modifications of the flower due to adhesion, cohesion, and suppression of parts; classification of fruits; the seed and its parts; germination; the vegetable cell; protoplasm; chlorophyll; formation of new cells; various kinds of tissues; intercellular spaces; structure of leaves; exogenous and endogenous growth; food of plants; reproduction of flowering plants; nature of the pollen-grain; fertilization of the ovule; reproduction in ferns; the spore. Outlines of classification; examination and classification of

common plants belonging to the following natural orders :—Ranunculaceæ, Cruciferæ, Malvaceæ, Leguminasæ, Rosaceæ, Sapindaceæ, Umbelliferæ, Compositæ, Labiatæ, Coniferæ, Araceæ, Liliaceæ, Friliaceæ, Iridaceæ, Gramineæ, the characters and general properties of these orders.

(*b*) That this Examination in Botany include practical work in the shape of a study of some plant, furnished to the candidate by the Examiner.

(*c*) That the University set a special paper on Botany of a more advanced kind, involving a further year's work : for the use of the Department in Examinations for First C. Such paper, though sent by the University Examiner, to be taken only by Departmental Candidates.

(3) That in the Honour work of the Junior Matriculation Examination, the University Curriculum include an extra paper on the English Language, of a character similar to the Pass paper of the First Year, (page 13, University Curriculum), based upon Earle and Bain.

(4) The aforesaid recommendations of the Committee are based on the assumption that all the papers for the Junior Matriculation, Pass and Honour are to be printed by and at the cost of the Department, including the papers on Greek.

All which is respecfully submitted. DAN. WILSON.

Moved by Mr. Falconbridge, seconded by Mr. Houston, and carried, That a Committee consisting of the Vice-Chancellor, Dr. Wilson, Mr. Moss, Father Vincent, Dr. Fulton, Dr. Caven, Judge Cameron, Judge Patterson, Prof. Galbraith, Dr. Oldright, Mr. Houston, Dr. McFarlane, Mr. Falconbridge, Dr. Wright, Mr. Foster, Mr. John Macdonald, Dr. O'Sullivan be appointed to consider the propriety of procuring the establishment of a teaching Faculty or School of Medicine, which shall bear more intimate relations with the University of Toronto than do any of the existing Schools of Medicine, such Committee to report at a special meeting of the Senate, to be called for Friday, March 18th, at 8 p.m.

On motion of Mr. Houston, seconded by Mr. Falconbridge, the following resolution was adopted :—

That the Board of Trustees be requested to provide funds for the purchase of copies of the "Fasti," to be distributed as a University exchange.

Moved by Mr. Falconbridge, seconded by Dr. McFarlane, That the question of printing the University Curriculum annually and adding a calendar as to University meetings, be referred to a Committee consisting of the Vice-Chancellor, Dr. Wilson, Mr. Falconbridge, Dr. Oldright and Mr. Houston.—*Carried.*

Moved by Dr. Oldright, seconded by Mr. Millar, and carried, That a special committee consisting of the Vice-Chancellor, Dr. Wilson, Mr. Falconbridge, Mr. Dickson, Mr. Houston and the mover, be appointed to consider the advisability of framing regulations for the admission of candidates to the Arts Course, at stages later than that of Senior Matriculation.

The Senate adjourned to Friday, March 18th, at 8 p.m.

DAN. WILSON,
Chairman.

Minutes of a meeting of the Senate, held in the Senate Chamber, March 18th, 1887.

Present :—Dr. Wilson, (in the chair), Mr. Dickson, Dr. Fulton, Dr. Ogden, Rev. N. Wolverton, Rev. Father Vincent, Rev. Dr. Sheraton, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Gibson, Dr. Richardson, Mr. Kingsford, Mr. King, Dr. McFarlane, Mr. Falconbridge, Dr. Adam Wright, Mr. Foster, Rev. Dr. Caven, Rev. D. J. Macdonnell.

A letter from the Registrar of Trinity College, proposing a Joint Matriculation Examination, was referred to a Committee composed of Dr. Wilson, Mr. Embree, Mr. Millar, Prof. Hutton and Mr. Houston.

On motion of Dr. Wilson, seconded by Dr. Caven, the following Statute was read a first time :—

By the Senate, etc.:

Be it enacted, That First Class Teachers' Certificates be accepted *pro tanto*, in lieu of the Senior Matriculation or First Year's Examination; and that teachers holding Grades A and B be allowed the options granted to Honour men, in the subjects or courses in which those certificates are granted; provided always that all candidates for Scholarships or relative standing shall take the full Senior Matriculation or First Year's Examination.

Dr. Wilson presented the following report of the Committee on a proposed Medical Faculty:—

To the Senate, etc.:

GENTLEMEN,—The Committee to whom the proposals for placing Medical Education in connection with the University of Toronto on a more efficient basis, beg leave to report as follows:

It is desirable to establish a Medical College, to be known as "The University of Toronto Medical College," which shall be the Medical Faculty of the University.

The College shall have a governing body, which shall consist of the members of the College Council (as hereinafter specified), two members nominated by the Government, six members elected by the Senate of the University, and the Chairman and one other member of the Hospital Trust.

There shall be a College Council which shall consist of the Professors of the Medical College, including such Professors in the School of Practical Science as are giving instruction in the subjects of the Medical Curriculum.

The Governing Board shall hold in trust for the purposes of the College all properties belonging to the Institution, have general charge of finances, determine all fees, and make all appointments in the Teaching staff.

The College Council shall have control of all purely educational matters, including the conduct and discipline of the students in the College, in accordance with the curriculum of the University.

If the Faculty or Faculties of the Toronto School of Medicine or Trinity Medical School, Toronto, decide to suspend their charter or charters, and accept the proposed scheme, the members of such Faculty or Faculties shall hold as far as possible the same positions in the new College as they hold as professors or lecturers in the present schools.

The present salary of professors shall be maintained *pro rata*; and for the purpose of defining what is understood by salaries, the scale at present existing in Trinity Medical School shall be taken as the basis; and a practical scheme for retiring allowances for the professors shall be arranged.

The Governing Board shall seek from the Ontario Government the power to raise the sum of dollars for the purpose of purchasing or erecting suitable buildings in or near the hospital grounds.

All Medical Examinations shall be conducted by the Professors in the Faculty of Medicine, and such other examiners as may from time to time be associated with them by appointment of the Senate.

All of which is respectfully submitted.

DANIEL WILSON,
Chairman.

March 18th, 1887.

Moved by Dr. Wilson, seconded by Dr. McFarlane, and carried, That the report now read be received and printed, with a view to its being submitted to the members of the Faculties of the Medical Schools in Toronto, and to the Trustees of the Toronto General Hospital.

Moved by Dr. Wilson, seconded by Dr. McFarlane, and carried, that the Vice-Chancellor, Mr. Falconbridge and Dr. Wilson be a committee to communicate with the representatives of the Medical Schools and the trustees of the General Hospitals, with a view to giving effect to the scheme set forth in the report, or to suggest such modifications as may render it generally acceptable and of practical efficiency.

Dr. Wilson presented the following report of the Committee on the Classification of Pass Candidates in Arts, which was *received* on motion of Mr. Kingsford, seconded by Rev. D. J. Macdonnell.

To the Senate, etc.:

GENTLEMEN,—The committee to whom the report on the Classification of Candidates was referred back with a view to the reconsideration of certain proposals therein set forth, beg leave to report that they have given the subject renewed consideration and recommend that the following be adopted as the full scheme of classification :—

1. That the Course hitherto designated the Honour Course shall be designated the Special Course, and shall be arranged in first, second and third classes in Honours; and the Course hitherto designated the Pass Course shall be designated the General Course, and shall be arranged in first, second and third grades, and the percentages shall be 66, 50 and 33.

All which is respectfully submitted.

DANIEL WILSON,
Chairman.

March 18th, 1887.

Moved by Mr. Kingsford, seconded by Rev. D. J. Macdonnell, That the meeting stands adjourned to the call of the Chair for the purpose of considering any measure introduced into the Legislature dealing with the University of Toronto or University College.

Confirmed.

W. MULOCK,
Vice-Chancellor.

SPECIAL meeting of the Senate held in the Senate Chamber, April 11th, 1887.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Mr. Moss, Mr. Dickson, Dr. Ogden, Rev. Father Vincent, Dr. Sheraton, Dr. Castle, Mr. Mortimer Clark, Mr. Embree, Dr. Larratt Smith, Prof. Chapman, Prof. Hutton, Prof. Galbraith, Dr. Oldright, Mr. Gibson, Mr. Kingsford, Mr. King, Mr. Woods, Mr. Falconbridge, Dr. Wright, Mr. Foster, Dr. Caven, Mr. Justice Patterson, Chancellor Boyd, Mr. John Macdonald, Dr. O'Sullivan.

Moved by Dr. Caven, seconded by Mr. Woods, and carried, That it is inexpedient for the Senate at the present time to take any action touching the proposed changes in Upper Canada College.

The Senate adjourned.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, April 14th, 1887.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Rev. Father Vincent, Dr. Sheraton, Dr. Castle, Mr. Embree, Prof. Galbraith, Dr. Oldright, Mr. Houston, Mr. Coyne, Mr. King, Dr. Caven, Chancellor Boyd.

Moved by Dr. Oldright, seconded by Dr. Sheraton, and carried, That the Board of Medical Studies be requested to consider the question whether an undergraduate in Medicine who has not passed in the earlier years of his course the examinations prescribed for those years shall in a later year be permitted to proceed in Honours.

Dr. Wilson gave notice that he will introduce a statute at next meeting relative to Honour work of Ethnology in the Department of Modern Languages.

On motion of Dr. Wilson, seconded by Dr. Sheraton, a statute received its first reading, which proposed that Chemistry and Biology of Junior Matriculation should be divided into Pass and Honour work, and prescribing the work.

The statute was referred to the Board of Art Studies.

On motion of Dr. Wilson, seconded by Mr. Embree, The Statute which proposes that First Class Teachers' Certificates be received *pro tanto* for Senior Matriculation and First Year, and which has received its first reading, was referred to a Committee consisting of Dr. Wilson, Mr. Embree, Mr. Houston, and Prof. Galbraith.

On motion of Mr. Houston, seconded by Mr. Coyne, A proposal respecting Honour French in the Third Year was referred to the Board of Arts Studies.

On motion of Dr. Oldright, seconded by Mr. Embree, The Senate went into Committee of the Whole on the report of the Committee on the Classification of Pass Candidates, which was received at the meeting of March 18th.

The Committee rose, reported progress, and asked leave to sit again.

The report was referred back to the same Committee as made the report, (Dr. Wilson, Prof. Hucton, Prof. Galbraith, Dr. Castle, Principal Woods, Mr. Embree and Mr. Dickson) with the addition of Mr. Gibson, Mr. Coyne, Mr. King, Dr. Caven, Mr. Houston and the Vice-Chancellor, on motion of the Vice-Chancellor, seconded by Dr. Oldright.

On motion of Mr. Houston, seconded by Dr. Oldright, Mr. Houston's motion respecting changes in the course in Civil Polity, was referred to the Board of Arts Studies.

The Senate adjourned to Friday, April 15th, at 8 p.m.

Confirmed.

WM. OLDRIGHT,
Chairman *pro tem.*

MINUTES of a meeting of the Senate, held in the Senate Chamber, April 15th, 1887.

Present:—Mr. Moss, Rev. Father Vincent, Mr. Embree, Dr. Oldright (in the Chair), Mr. Houston.

The following report of the Committee on the acceptance of First Class Certificates *pro tanto*, was presented, and adopted on motion of Mr. Embree, seconded by Mr. Houston.

To the Senate, etc. :

GENTLEMEN,—Your Committee on the acceptance of First Class Certificates *pro tanto* for First year and Senior Matriculation recommend that the statute be adopted in the following form:

By the Senate, etc. :

Be it enacted, That First Class Teachers' Certificates be accepted *pro tanto* in lieu of the Senior Matriculation on First Year's Examination; and that teachers holding grades A and B be allowed the options granted to Honour men in the subjects or courses in which those certificates are granted; provided always that all candidates for Scholarships or relative standing shall take the full Senior Matriculation or First Year's Examination; and that this come into force at the May Examination for the current year.

The statute in the preceding form received its second reading, and passed on motion of Mr. Embree, seconded by Mr. Houston.

The following report of the Board of Arts Studies was presented and adopted on motion of Mr. Houston, seconded by Mr. Embree:—

To the Senate, etc. :

GENTLEMEN,—The Board of Arts Studies beg leave to report for the approval of the Senate the following draft of statute relative to changes in the Matriculation Examinations:—

By the Senate, etc. :

Be it enacted, That in the Junior Matriculation there shall be Pass and Honour work in Chemistry and Biology, and that the following shall be the subjects prescribed therefor:—

I. Elementary Chemistry.

Definition of Objects of the Science, Relation of the Physical Sciences to Biology, and of Chemistry to Physics, Chemical Change, Elementary Composition of Matter, Laws of Combination of the Elements, Atomic Weight, Specific Heat, Nomenclature, Classification, the preparation, characteristic properties, and principal compounds of the following elements :—Hydrogen, Chlorine, Bromine, Iodine, Oxygen, Sulphur, Nitrogen, Phosphorus, Carbon, Silicon.

The Honour Examination will include the Chemistry of all the elements sufficient to illustrate the classification known as Mendeleyeff's Law.

II. Elementary Biology.

1. Elements of Botany.

The examination will test whether the candidate has practically studied representatives of the following natural orders of flowering plants: Ranunculaceæ, Cruciferæ, Malvaceæ, Leguminaceæ, Rosaceæ, Sapindaceæ, Umbelliferæ, Compositæ, Labiatæ, Copuliferæ, Araceæ, Liliaceæ, Iridaceæ, Gramineæ, Coniferæ ; also conspicuous representatives of the chief sub-divisions of Cryptogams, such as a fern, a lycopod, a horse-tail, a liverwort, a moss, a lichen, a mushroom and a chara.

A knowledge of structure is required such as can be obtained without the use of the microscope. Attention will be given in the examination to drawing and description of parts of plants supplied, and to the classification of these: comparison of the different organs, morphology of root, stem, leaves and hairs, parts of the flower, reproduction of flowering plants, pollination, fertilization, and the nature of fruits and seeds.

2. Elements of Zoology.

An acquaintance with the structure of familiar and conspicuous animals similar to that required in plants. The chief systems of organs, *i.e.*, the skin, skeleton, muscles, nervous system, intestines, circulatory and respiratory organs as modified in mammals, birds, reptiles, amphibia, fishes, molluses, anthropods and worms.

3. Scope and Aim of Biology.

Elements of minute structure and physiology of plants and animals. The interrelation of plants and animals. Economic aspects of Biology, dependence of plants and animals on surrounding conditions.

Honour Examination :—The subjects of the Honour Examination will be the same as those of the Pass Examination, but the questions set will be of a more difficult character.

The statute in the preceding form received its second reading and passed on motion of Mr Houston, seconded by Mr. Embree.

On motion of Mr. Houston, seconded by Dr. Oldright, a statute making Ethnology optional in the Fourth Year, received its first reading.

The following report of the Board of Arts Studies was presented, and adopted on motion of Mr. Moss, seconded by Mr. Houston :—

To the Senate, etc :

Gentlemen,—The Board of Arts Studies beg leave to report they recommend the following changes in the books prescribed in the Department of Civil Polity :

In the Third Year, Walker's "Political Economy" instead of Roger's "Manual of Political Economy."

In the Fourth Year, Jevon's "Money and the Mechanism of Exchange" and Bagehot's "The English Constitution,' instead of Smith's "Wealth of Nations" and Cox's "British Commonwealth," respectively.

In the Honour Work of the Third Year, Holland's "Elements of Jurisprudence" instead of Lorimer's "Institutes of Law."

In the Honour Work of the Fourth Year, Laughlin's edition of Mill's "Principles of Political Economy" for Cairne's "Character and Logical Method of Political Economy,"

and Bourinot's "Parliamentary Procedure and Practice," (Chapters I. and XXII.) instead of Bayne's "New Analytic of Political Economy."

The following are recommended as works for Examination for the Blake Scholarships:

Walker, Political Economy; Fawcett, Manual of Political Economy; Holland, Elements of Jurisprudence; Taswell-Langmead, English Constitutional History; Dicey, Introduction to the Law of the Constitution; Cooley, Principles of Constitutional Law in the United States.

All which is respectfully submitted.

DANIEL WILSON,
Chairman.

April 15th, 1887.

Moved by Mr. Houston, seconded by Mr. Moss, and carried,—That Drs. McFarlane and Adam Wright, be added to the Committee appointed to proceed with the organization of the University of Toronto Medical College.

The Senate adjourned.

MINUTES of a meeting of the Senate, held in the Senate Chamber, May 11th, 1887.

Present:—Dr. Wilson (in the Chair), Rev. Father Vincent, Mr. King, Dr. A. H. Wright, Prof. Galbraith, Dr. Ellis, Dr. Oldright, Dr. O'Sullivan.

Dr. Wilson presented the following report of the Scrutineers appointed to act at the Senate Election for 1887:—

To the Senate, etc.:

GENTLEMEN,—The undersigned Scrutineers appointed to act at the counting of the votes cast during the election of members of the Senate for 1887, have the honour to report as follows:

That Messrs. Galbraith, Ellis and Oldright, have been elected to represent the graduates on the Senate, the vote standing:—

John Galbraith, M.A., C.E.	428
Wm. H. Ellis, M.A., M.B	373
Wm. Oldright, M.A., M.D	370
Wm. Houston, M.A.	341

To represent the High School Teachers of Ontario on the Senate, Mr. L. E. Embree, B.A., was elected, the vote standing:—

L. E. Embree, B.A	107
P. S. Campbell	1
D. C. McHenry	1
A. McMurchy	1
J. E. Wetherell	1

All which is respectfully submitted.

DANIEL WILSON,
pro Vice-Chancellor.

W. T. BOYD,
T. C. MULLIGAN, } Scrutineers.

May 4th, 1887.

The following resolution, moved by Dr. Wilson, seconded by Dr. O'Sullivan, was adopted:—

Resolved,—That the Senate of the University of Toronto avail themselves of this their first meeting since the death of the late President of University College, Rev. Dr. McCaul,

formerly Vice-Chancellor of the University, and for many years an active member of this Board, to record their sense of the valuable services rendered by him to higher education in Canada; and the advantages which this Senate derived from his great experience, no less than from his scholarly culture, during the many years in which they were privileged to enjoy his counsel and co-operation in carrying on the work of the University. To his bereaved widow and family they respectfully tender the assurance of their sincere sympathy.

That a copy of the resolution be forwarded by the Registrar to Mrs. McCaul.

It was decided to hold a Special Convocation to confer Degrees and Honours in Medicine in the library of the University, on Saturday, May 14th, at 3 p.m., and Dr. Wilson was appointed to act for the Vice-Chancellor, on motion of Dr. O'Sullivan, seconded by Dr. Oldright.

The Senate adjourned.

MEETING of the Senate held May 14th, 1887.

The Senate assembled in the Senate Chamber, and proceeded thence to the library where Degrees in Medicine were conferred and other proceedings had as appears on record in the Book of Convocation.

MINUTES of a meeting of the Senate, held in the Senate Chamber, May 27th, 1887.

Present:—Vice-Chancellor (Mr. Mulock), in the chair, Dr. Wilson, Mr. Moss, Dr. Ogden, Rev. Father Vincent, Dr. Sheraton, Dr. Castle, Prof. Hutton, Dr. Richardson, Mr. Macbeth, Dr. McFarlane, Mr. Falconbridge, Dr. Oldright, Dr. A. H. Wright, Dr. Caven, Dr. O'Sullivan.

The following resolution as to a Committee to consider the proposed Faculty of Law, was moved by Dr. O'Sullivan and seconded by Mr. Macbeth, and carried: That the University Act having made provision whereby a Faculty of Law may be established in this University, a Committee be named to consider and report on what steps may be desirable in view of the new powers established by the Act; and with power to confer with any Committee that may be appointed for that purpose by the Law Society of Upper Canada, and that the following gentlemen shall constitute the Committee:—The Chancellor, Sir Mathew C. Cameron, Judge Patterson, the Vice-Chancellor, Dr. L. W. Smith, the Minister of Education, Mr. Clark, Mr. J. M. Gibson, Mr. Macbeth, Mr. Coyne, Mr Kingsford, Mr. King, Mr. Foster, Chancellor Boyd, Dr. O'Sullivan.

The following resolution, moved by Dr. Wilson, seconded by Dr. Richardson, was adopted:—

Resolved,—That the Senate of the University of Toronto avail themselves of this their first meeting since the death of Dr. Fulton, to record their regret at the loss sustained by them, along with the profession of which he was an honoured member, by his lamented death; and to convey to his family the expression of their sincere sympathy in their sudden bereavement.

That a copy of this resolution be forwarded to Miss Fulton.

The Senate adjourned to Saturday, May 28th, at 8 p.m.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, May 28th, 1887.

Present:—The Vice-Chancellor (Mr. Mulock), in the chair, Dr. Wilson, Mr. Moss, Dr. Ogden, Dr. Robertson, Rev. Father Vincent, Dr. McFarlane, Dr. A. H. Wright, Prof. Galbraith, Dr. Ellis, Dr. Oldright, Dr. O'Sullivan.

A letter was read from the Secretary of the Trinity Medical School, informing the Senate of the appointment of Dr. H. Robertson as its representative on the Senate.

On motion of Dr. Wilson, seconded by Dr. McFarlane, the following statute to create a Medical Faculty was read a first time and referred to a Committee :—

By the Senate, etc. :

Be it enacted, 1. There is hereby established in the University of Toronto a Teaching Faculty in Medicine.

2. Said Faculty shall be known as University of Toronto Medical College.

3. The teaching staff shall consist of such professors, lecturers and other instructors as, along with the teaching staff in the University and University College, shall be necessary in order to give full instruction in the various subjects set forth in the Curriculum in Medicine of the University.

4. No person (other than a Demonstrator of Anatomy or) shall be appointed to such staff for a longer term than five years, but shall be eligible for re-appointment from time to time, but no person over the age of sixty years shall at any time be appointed to the staff, or re-appointed as the case may be.

5. Any member of the staff may be removed at any time on the recommendation of the Senate.

6. Each member of the staff shall be paid such salary as shall be mentioned in his appointment.

7. Every student of said Medical College shall, in the matter of discipline, be subject to the rules and regulations from time to time prescribed in that behalf by the staff.

8. Every student shall pay the following fees :—

9. All fees derived from students shall form part of the income of the University

10. No student shall be entitled to a certificate of attendance until he shall have paid all fees owing by him.

The following gentlemen compose the Committee to which this Statute was referred : The Vice-Chancellor, Dr. Wilson, Dr. McFarlane, Mr. Falconbridge, Dr. A. H. Wright, Dr. Ellis and Judge Patterson.

On motion of Dr. O'Sullivan, seconded by Mr. Moss, a statute to create a Faculty of Law was read a first time, and referred to a Committee consisting of Mr. Kingsford, Mr. King, Dr. O'Sullivan, the Vicé-Chancellor and Mr. Moss.

Moved by Dr. McFarlane, seconded by Mr. Moss, That the Vice Chancellor and Dr. Wilson be a Committee to determine the values to be attached to the subjects in the Sciences at Junior and Senior Matriculation, and to specify the requirements for Honour Work in Rhetoric and English Literature in the same.

The Senate adjourned.

MINUTES of a meeting of the Senate, held in the Senate Chamber, June 3rd, 1887.

Present:—Dr. Wilson, (in the chair), Mr. Moss, Dr. Sheraton, Dr. Castle, Mr. Embree, Mr. Kingsford, Mr. Foster, Dr. A. H. Wright, Dr. Oldright, Chancellor Boyd, Dr. Caven, Mr. John Macdonald, Dr. O'Sullivan.

The Senate adjourned after confirming the report of the Examiners in the Faculty of Law.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, June 24th, 1887.

Present :—Vice-Chancellor Mulock (in the chair), Dr. Wilson, Mr. Moss, Dr. Robertson, Dr. Odgen, Rev. Father Vincent, Prof. R. Wright, Mr. Kingsford, Mr. King, Dr. McFarlane, Dr. A. W. Wright, Prof. Galbraith, Dr. Oldright, Dr. O'Sullivan, Dr. Ellis.

Moved by Mr. Kingsford, seconded by Dr. McFarlane, That this meeting be considered a general meeting.—*Carried.*

Dr. O'Sullivan was appointed Convenor of the Committee appointed to confer with the Committee of the Law Society, on the subject of the establishment of a Teaching Faculty in Law.

A memorandum from the Minister of Education, regarding suggested changes in the requirements for the Junior Matriculation Examination was received.

On motion of Dr. Oldright, seconded by Prof. R. Wright, the following Statute was read a first time :—

By the Senate, etc.:

Be it enacted, That candidates may enter the University at the Second Examination, and that undergraduates of First Year Standing may take the Second Examination, if, in addition, they take Pass Examinations on the subjects of the First Year, according to the following scheme :—

Mathematics, English and Chemistry or Biology, must be taken by all who intend pursuing the Pass Course.

Greek, or French and German, by those in the Honour Department of Physics, Mathematics and Natural Sciences.

Latin, by those in the Honour Department of Mental and Moral Philosophy.

Mathematics, by those in all Honour Departments except Mathematics and Physics.

English, by those in all Honour Departments except Modern Languages.

Chemistry or Biology, (or Mineralogy and Geology), by those in all Honour Departments except Natural Sciences.

On motion of Dr. Wilson, seconded by Prof. Wright, the following report of the Committee, to which was referred the Statute to establish a Teaching Faculty in Medicine, was adopted :—

To the Senate, etc.:

Gentlemen,—The Committee to which was referred the proposed Statute for the establishment of a Teaching Faculty in Medicine, beg leave to recommend the following :—

By the Senate of the University of Toronto.

Be it enacted 1. That there is hereby established in the University of Toronto a Teaching Faculty in Medicine, which shall be known as the Medical Faculty of the University of Toronto.

2. The Teaching Staff shall consist of such Professors, Lecturers, Demonstrators and other Instructors, as along with the Teaching Staff of the Faculty of Arts, shall be necessary in order to give full instructions in the various subjects that may from time to time be prescribed by the Curriculum in Medicine of the University of Toronto.

3. All Professors in the Medical Faculty shall be members of the University Council when established.

4. Such members of the University Council as are engaged in giving instruction in subjects embraced in the Curriculum in Medicine, together with such other persons engaged in said Faculty as the Senate may from time to time determine, shall constitute a Board of Management to deal with matters pertaining exclusively to the Medical Faculty.

5. Such Board of Management shall as soon as possible elect from their number a Dean and Secretary, to be known as the Dean and Secretary of the Medical Faculty, and shall thereafter annually, at a meeting held on the second Monday in April of each year, which shall be called the Annual Meeting of the Medical Faculty, elect such officers, who shall hold office till the election of their successors.

6. To meet the requirements of the Curriculum in Medicine of the University of Toronto, and that of the College of Physicians and Surgeons of Ontario, instruction shall be given in each of the following subjects, viz.: Biology, Chemistry, Physics, Anatomy, (Human and Comparative) Pharmacology and Therapeutics, Pathology, Surgery, Medicine, Obstetrics, Gynæcology, Medical Jurisprudence, Hygiene, and such other subjects as the Senate may from time to time determine.

7. The Teaching Staff shall consist of the following:—

(1) Professor of General Biology and Physiology.
(2) Lecturer on Physiology and Demonstrator of Histology.
(3) Lecturer on Comparative Anatomy.
(4) Demonstrator of Practical Biology.
(5) Professor of Chemistry.
(6) Professor of Applied Chemistry.
(7) Demonstrator of Practical Chemistry.
(8) Professor of Physics.
(9) Demonstrator of Practical Physics.
(10) Professor of Anatomy (General and Surgical).
(11) Lecturer on Topographical Anatomy.
(12) Lecturer on Elementary Anatomy (Human and Comparative) and Senior Demonstrator.
(13) Assistant Demonstrator, under assistants and prosectors.
(14) Professor of Pharmacology and Therapeutics.
(15) Demonstrator of *Materia Medica* and Pharmacy.
(16) Demonstrators of Pathological Anatomy, Histology and Bacteriology.
(17) Professor of Practice of Surgery.
(18) Professor of Clinical Surgery.
(19) Professor of Principles of Surgery and Surgical Pathology.
(20) Professor of Principles and Practice of Medicine.
(21) Professor of Clinical Medicine and Medical Pathology, Lecturer on Dermatology.
(22) Professor of Obstetrics.
(23) Professor of Gynæcology.
(24) Professor of Medical Jurisprudence.
(25) Professor of Hygiene.
(26) Professor of Ophthalmology and Otology.
(27) Clinical Lecturer on Ophthalmology and Otology.
(28) Instructor in Laryngology and Rhinology, and such other Professors, Lecturers, Demonstrators and Instructors as may from time to time be appointed.

8. No member of the teaching staff (other than Professors or Lecturers devoting their whole time to the work of the University or School of Practical Science,) shall be appointed for a longer period than five years, but such members shall be eligible for re-appointment from term to term thereafter.

9. Any member of the staff may be removed at any time on the recommendation of the Senate.

10. Each member of the staff shall discharge such duties as are prescribed, and shall be paid according to the terms mentioned in his appointment.

11. It shall be lawful for the University Senate to recommend persons to fill vacancies on the Teaching Staff.

12. Until otherwise determined by the Senate by resolution in that behalf, each student shall pay to the Registrar of the University the following fees:

Before commencing his medical studies—five dollars.

For a course on—1. Demonstrations of Anatomy, including material for dissection; 2. Physiology; 3. Chemistry; 4. *Materia Medica* and Therapeutics; 5. Medicine; 6. Clinical Medicine; 7. Surgery; 8. Clinical Surgery; 9. Midwifery and Diseases of Women and Children—twelve dollars each.

Anatomy, descriptive and surgical—fifteen dollars each.

1. Normal Histology; 2. Pathological Histology—eight dollars each.

1. Medical Jurisprudence, three months' course; 2. Practical Chemistry—six dollars each.

1. Sanitary Science; 2 Biology, (including Botany and Zoology)—five dollars each.

Psychology—five dollars.

The third course, or any branch, free.

13. Such laboratory fees shall be paid to the University, as may be determined by the Council.

14. All fees shall form part of the income of the University.

15. Tickets of admission to any of the courses of lectures or of practical instruction, shall be issued by the Registrar of the University on payment of the fees for such courses, and the attendance of the students at such courses must be certified on the backs of such tickets by the Professors, Lecturers, Demonstrators, or Instructors, before such tickets shall be received by the Registrar, as entitling the possessors to proceed to examination.

16. All fees shall be payable on or before the first of November of each year, and thereupon the Secretary shall enrol as students of the Faculty all who have paid the prescribed fees.

17. Matriculated students or graduates in the Faculty of Arts, who have attended during their Arts course any course of lectures or of practical instruction of the character and duration required by the Curriculum of Medicine, may obtain tickets for the same from the Registrar of the University, on payment of the ordinary fees demanded from students of Medicine.

18. Matriculated students or graduates in Arts in the Department of Natural Science, who have taken Honours in any examination in the Faculty of Arts, which is or shall be held equivalent by the Senate, to any of the examinations prescribed in the Medical Curriculum, may obtain tickets for the qualifiying classes attended by them, without the payment of the corresponding fees.

19. Certificates of attendance on such lectures or demonstrations shall be given only on the presentation of such tickets.

20. The regular session shall commence on the first of October in each year, and continue until the first of April following.

21. The Board of Management may establish a summer session commencing in April or early in May.

All which is respectfully submitted.

W. MULOCK,
Chairman.

June 24th, 1887.

A statute embodying this report received its second reading and passed, on motion of Dr. Wilson, seconded by Prof. Wright.

The Senate adjourned.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, June 29th, 1887.

Present :—The Vice-Chancellor (Mr. Mulock), The Minister of Education, Dr. Wilson, Dr. Ogden, Dr. Castle, Mr. Embree, Prof. Ramsay Wright, Prof. Galbraith, Dr. Ellis, Rev. Father Vincent, Mr. King, Dr. Oldright, Dr. McFarlane, Dr. Adam Wright.

Dr. Wilson presented the following report of the Committee on the work at Junior Matriculation, which was adopted on motion of Dr. Wilson, seconded by Mr. Embree :—

To the Senate, etc :

GENTLEMEN,—The Committee to whom was referred the application from the Education Department for certain changes in the Junior Matriculation Examination, beg leave to recommend the following adoption ; with instructions to the Examiners to keep in remembrance the essential difference between the Examinations employed as a matriculation test, for students wishing to enter the University with a view to study, and their application as a test for the classification of teachers :—

1. Below the list of Prose selections, (curriculum page 10,) add, "The candidates will also be required to have read, critically, the prose authors prescribed for this Examination."

2. Below "Modern Geography with America and Europe," (page 10,) add, "Physical Geography."

3. Above "Critical Reading of one of Shakespeare's Plays," (page 12), add, "A paper on English Grammar and Philology."

4. At foot of page 12, add, "The Examiners will allow candidates at the Junior Matriculation Examination a choice of questions on each paper."

5. At the Junior Matriculation after the present year, it is recommended that Chemistry, Botany and Physics shall each be valued at fifty, and that the values attached to all the prescribed subjects be revised before another examination.

6. After advising with the Education Department, and consulting with the Lecturer in German, it is recommended that for the Pass Junior Matriculation 1888, in German, the following texts be substituted for those previously named: *Hauff*, Das Kalte Hertz; *Schiller*, Der Gang Nach dem Eisenhammer.

All which is respectfully submitted.

DANIEL WILSON,
Chairman.

June 20th, 1887.

The Statute respecting Matriculation at later stages than Senior Matriculation was read a second time and passed, on motion of Dr. Wilson, seconded by Dr. Oldright.

A letter was read from Alfred Baker, Registrar of the University, resigning the office of Registrar.

The following resolution, moved by Dr. Wilson, and seconded by Dr. Castle, was adopted:—

Resolved, That the Senate of the University of Toronto desire to record their deep sense of the loss sustained by this Senate, in common with the entire community, in the death of the late Chief Justice, Sir Matthew Crooks Cameron, a distinguished ornament of the Canadian Bench, and a gentleman whose high culture and liberal public spirit gave special value to his services as a member of the Senate of this University.

That a copy of this resolution be forwarded to the relatives of the lamented Chief Justice.

Senate adjourned to Monday, July 4th, at 8 p.m.

Confirmed.

W. MULOCK,
Vice-Chancellor.

MINUTES of a meeting of the Senate, held in the Senate Chamber, July 4th, 1887.

Present:—The Vice-Chancellor (Mr. Mulock), Dr. Wilson, Dr. Robertson, Dr. Ogden, Prof. Ramsay Wright, Mr. King, Dr. McFarlane, Dr. Adam Wright, Mr. Foster, Prof. Galbraith, Dr. Oldright, Dr. Ellis, Rev. Dr. Caven, Dr. O'Sullivan.

The Vice-Chancellor presented the following report of the Committee on the establishment of a Faculty of Medicine:—

To the Senate, etc.:

GENTLEMEN,—Your Committee appointed to consider and report upon the subject of the establishment of a Teaching Faculty in Medicine, beg to report as follows:—

1. That your Committee at the commencement of their labours caused communications to be sent to the Toronto and Trinity Medical Schools with a view to ascertaining if both or either of these institutions were prepared to co-operate with this University in the establishment of a Medical Faculty, but learned with deep regret that the authorities of Trinity Medical School were unwilling to join in such a scheme. Toronto School of Medicine, however, took an opposite view, leading members of that institution expressing entire concurrence with the opinion entertained by the authorities of the University of Toronto that in the interests of medical science, and therefore of the general public, it is the duty of the Provincial University, at the earliest possible moment, to establish a Teaching

Faculty in Medicine instead of permitting that important branch of education to remain almost exclusively in the hands of joint stock companies liable to be managed with a view to pecuniary profit to the proprietors rather than the cause of Medical Science. Your Committee do not desire to be understood as expressing an opinion that such has been the policy of any medical school, but the circumstance that the efforts of this University extending over a long period of years to encourage a higher standard of medical education appear not to have been practically seconded by any medical school, has convinced your Committee that co-operation can be secured only from a teaching staff directly under the control of the University. Such an arrangement, having for its object, not private gain, but the general interest of the people, is best calculated to promote the highest interest of medical science; and in order to the attainment of that end, your Committee desire to place on record their appreciation of the assistance in that behalf rendered by the members of the staff of the Toronto School of Medicine.

2. Your Committee beg to recommend that the following Teaching Faculty be forthwith appointed:—

(1) A Professor of Practice of Surgery.
(2) A Professor of Clinical Surgery.
(3) A Professor of Principles of Surgery and Surgical Pathology.
(4) A Professor of Principles and Practice of Medicine.
(5) A Professor of Clinical Medicine and Medical Pathology and Lecturer on Dermatology.
(6) An Associate Lecturer on Clinical Medicine.
(7) A Professor of Descriptive and Surgical Anatomy.
(8) A Lecturer on Topographical Anatomy.
(9) A Lecturer on Elementary Anatomy (Human and Comparative) and Senior Demonstrator of Anatomy.
(10, 11, 12) Three Demonstrators of Anatomy.
(13) A Professor of Gynæcology.
(14) A Professor of Obstetrics.
(15) A Professor of Pharmacology and Therapeutics.
(16) A Demonstrator of *Materia Medica* and Pharmacy.
(17) A Professor of Medical Jurisprudence.
(18) A Professor of Hygiene.
(19) A Professor of Ophthalmology and Otology.
(20) A Clinical Lecturer on Ophthalmology and Otology.
(21) An Instructor on Laryngology and Rhinology.
(22) A Demonstrator of Pathological Histology.
(23) A Professor of General Biology and Physiology.
(24) A Lecturer on Physiology and Demonstrator of Histology.
(25) A Demonstrator of Practical Biology.
(26) A Professor of Chemistry.
(27) A Professor of Applied Chemistry.
(28) A Professor of Physics.
(29) A Demonstrator of Physics.

3. Your Committee further recommend that the following persons be appointed to the positions above mentioned, namely:—

W. T. Aikins, LL.D., M.D., Professor of Practical Surgery.
L. McFarlane, M.B., Professor of Clinical Surgery.
I. H. Cameron, M.B., Professor of Principles of Surgical Pathology.
H. H. Wright, M.D., L.C.P., S.N.C., Professor of Principles and Practice of Medicine.
J. E. Graham, M.D., L.R.C.P., Professor of Clinical Medicine and Medical Pathology and Lecturer on Dermatology.
George Wright, M.A., M.B., Associate Lecturer on Clinical Medicine.
J. H. Richardson, M.D., M.R.C.S., Professor of Descriptive and Surgical Anatomy
M. H. Aikins, M.B., B.A., M.R.C.S., Lecturer on Topographical Anatomy.

J. P. McMurrich, M.A., Ph.D., Lecturer on Elementary Anatomy (Human and Comparative) and Senior Demonstrator of Anatomy.
J. Ferguson, B.A., M.B., Demonstrator of Anatomy.
H. Wilberforce Aikins, B.A., M.B., Demonstrator of Anatomy.
G. A. Peters, M.B., Demonstrator of Anatomy.
Uzziel Ogden, M.B, Professor of Gyncæology.
Adam H. Wright, B.A., M.B., Professor of Obstetrics.
James Thorburn, M.A., M.D., Professor of Pharmacology and Therapeutics.
O. R. Avison, M.D., Demonstrator of *Materia Medica* and Pharmacy.
W. W. Ogden, M.B., Professor of Medical Jurisprudence.
W. Oldright, M.A., M.D., Professor of Hygiene.
R. A. Reeve, B.A., M.D., Professor of Ophthalmology and Otology.
G. H. Burnham, Clinical Lecturer on Ophthalmology and Otology.
G. R. McDonagh, M.D., L.R.C.P., Instructor on Laryngology and Rhinology.
J. Caven, M.D., C.M., L.R.C.S.P., Demonstrator of Pathological Histology.
R. Ramsay Wright, M.A., B.Sc., Professor of General Biology and Physiology.
A. B. Macallum, B.A., Lecturer on Physiology and Demonstrator of Histology.
T. McKenzie, B.A., Demonstrator of Practical Biology.
W. H. Pike, M.A., Ph.D., Professor of Chemistry.
W. H. Ellis, M.A., M.D., Professor of Applied Chemistry.
James Loudon, M.A., Professor of Physics.
W. J. Loudon, B.A., Demonstrator of Physics.

4. That each Professor, Lecturer, Demonstrator, or other instructor, as part of his duties without additional remuneration, may be required by the Senate to act as Examiner at University Examinations in Medicine.

5. That subject to the provisions hereinafter contained, there be paid each year out of the tuition fees collected from medical students in such year, to the following persons whilst holding the positions for which they are hereby respectfully recommended, the proportion of the gross amount of such fees collected as aforesaid, set opposite their respective names, namely :—

	Decimal Part of Gross Earnings.
W. H. Aikins	.0591
H. H. Wright	.0591
J. H. Richardson	.0591
M. Ogden	.0591
J. Thorburn	.0591
O. R. Avison	.0059
W. W. Ogden	.0295
M. H. Aikins	.0236
W. Oldright	.0206
L. McFarlane	.0412
George Wright	.0118
J. E. Graham	.0412
R. A. Reeve	.0118
A. H. Wright	.0295
J. Ferguson	.0177
I. H. Cameron	.0177
G. H. Burnham	.0059
G. R. McDonagh	.0059
J. Caven	.0059
H. Wilberforce Aikins	.0059
G. A. Peters	.0059
Secretary	.0236
	.5991

6. A book or books, to be called the Daily Register, shall be kept, and therein each Professor, Lecturer, Demonstrator, or other instructor, member of the staff, shall enter each day the work done by him as such Professor, Lecturer, Demonstrator, or other instructor, as the case may be, and the length of time he was so occupied. At the close of each session the Secretary shall prepare from said Register, and transmit to the Bursar, a statement shewing the number of lectures or demonstrations given by each member of the staff during such session, and the actual number of lectures or demonstrations required of each member of the staff. The Board of Trustees shall thereupon examine such statement, and in the case of such of the staff as may have made default in discharging the full amount of services required of them, shall make such deduction from their salaries as to them may seem fit and reasonable.

7. For the purpose of further promoting the welfare of such Faculty, your Committee recommend that a standing Committee of the Senate be established and clothed with appropriate duties and responsiblities in order to the successful working of such Faculty.

8. Your Committee beg to report that they are advised that the proprietors of the building, teaching appliances, with all appurtenances at present used and enjoyed by the Toronto School of Medicine, and situate on Gerrard Street East in Toronto, may be leased for the period of three years, at an annual rental of $1,200; and, therefore beg to recommend that the University accept a lease of the same on said terms.

9. Your Committee further recommend that J. P. McMurrich, M.A., Ph.D., be appointed Lecturer on Elementary Anatomy (Human and Comparative) and Senior Demonstrator of Anatomy, at an annual salary of not more than $2,000. That Thomas McKenzie, M.A., be appointed Demonstrator of Practical Biology in connection with the Arts and Medical Faculties, at an annual salary of $200. That Prof. R. Ramsay Wright be appointed Professor of General Biology and Physiology; Prof. Pike be appointed Professor of Chemistry; Dr. W. H. Ellis be appointed Professor of Applied Chemistry; Prof. James Loudon be appointed Professor of Physics, and W. J. Loudon, B.A., be appointed Demonstrator of Physics in such Medical Faculty, but retaining also the respective positions held by them in University College, and in the School of Practical Science.

All which is respectfully submitted.

Your Committee further recommend that as a condition of any person being appointed to any position on the teaching staff of the Medical Faculty, he shall not be engaged in teaching in connection with any other Medical Faculty or School.

All which is respectfully submitted.

W. MULOCK,
Chairman.

Moved by Dr. Wilson, seconded by Mr. King, that the report be adopted.

Moved in amendment by Mr. King, seconded by Dr. Robertson, That it is inexpedient at present to make any recommendations of appointments to the staff of the new Medical Faculty to be created in connection with the University.

The amendment was lost, and the motion carried.

On motion of Mr. King, seconded by Dr. O'Sullivan, a statute having for its object the admission of A. A. Nack, LL.D., of Goettingen University to the Degree of LL.B., was read a first time.

Moved by Prof. Ramsay Wright, seconded by Dr. Oldright, and carried, That it be referred to a Committee composed of Dr. Wilson, Dr. Caven, Prof. Ramsay Wright, Mr. King and Mr. Moss, to report to the Senate on the application of Dr. A. A. Nack, for the Degree of LL.B., Mr. King to be convener.

Moved by Dr. Wilson, seconded by Dr. Caven, and

Resolved,—That the Senate of the University, in accepting the resignation by Mr. Alfred Baker, M.A., of the office of Registrar, which he has held for the past seven years, and the duties of which he has so efficiently and faithfully fulfilled, tender to him their most cordial congratulations on his appointment to the Professorship of Mathematics in this University.

Moved by Dr. Wilson, seconded by Prof. Ramsay Wright, and carried, That Hugh Hornby Langton, B.A., be appointed to perform the duties of Registrar of the University until by the proclamation of the University Act, permanent arrangements can be made in accordance with the provisions of that Act.

Moved by Prof. Ramsay Wright, seconded by Mr. King, and carried, That Dr. Wilson be, and he is hereby appointed to act as Vice-Chancellor in the absence of Mr. Mulock.

Mr. King gave notice that, at the next meeting of the Senate, he would introduce a motion to regulate the holding of meetings of the Senate.

The Senate adjourned to the call of the Chair.

RETURN

To an Order of the House, dated 7th March, 1887, giving a detailed statement of the expenditure from the Poor School Fund for the years 1885 and 1886, with sections and townships in which the expenditures were made, the rate on the dollar paid by the section in each year, with the length of time such schools were open, and the amount of aid, if any, received from county or township municipality.

By Command,

A. S. HARDY,
Secretary.

PROVINCIAL SECRETARY'S OFFICE,
6th April, 1887.

(Mr Wood, Hastings.)

RETURN giving a detailed statement of the expenditure from the Poor School Fund were made, the rate on the dollar paid by the section in each year, with the County or Township Municipality.

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
Algoma & North-West Ontario.	1 Assignack	See remarks.		100 00	47 50		Poor School grants to the older schools in Algoma are reduced from what was paid the last two years. Inspector unable to furnish school-rate. See remarks for 1886.
	2 do			100 00	38 00		
	3 do			100 00	47 50		
	4 do			100 00	38 00		
	5 do			100 00	47 50		
	6 do			100 00	57 00		
	7 do			100 00	57 00		
	1 Barrie Island				80 75		New school.
	1 Blind River (or Cobden)				57 00		
	1 Bruce Mines				47 50		
	1 Billings, etc			60 00	47 50		
	2 do			60 00	52 25		
	1 Carnarvon			60 00	47 50		
	2 do			60 00	38 00		
	3 do			60 00	95 00		New school.
	1 Campbell, etc				95 00		New school.
	2 do				47 50		
	3 do				47 50		
	1 Carlyle (or Collins' Inlet)				95 00		New school.
	1 Cockburn Island				47 50		
	2 do				47 50		
	1 Cobden						See 1 Blind River.
	1 Collins' Inlet						See 1 Carlyle.
	1 Coffin, etc				66 50		
	1 Day and Gladstone				61 75		
	1 Day and Kirkwood				71 25		New school.
	2 do						
	Ft. William (and 1 Neebing, 2 schools)				76 00		
	Ft. Francis				100 00		
	1 Gordon			100 00	47 50		
	2 Gordon (and Allan)			100 00	47 50		
	3 Gordon			100 00	38 00		
	4 do			100 00	71 25		New school.
	1 Gladstone and Bright				66 50		
	1 Howland			100 00	42 75		
	2 do			100 00	47 50		
	3 do			100 00	47 50		
	4 do			100 00	52 25		
	5 do			100 00	52 25		
	1 Ignace				57 00		
	1 Johnston				66 50		
			Carried forward		2,190 00		

for the years 1885, 1886, with sections and townships in which the expenditures length of time such schools were open, and the amount of aid, if any, received from

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
Algoma & North-West Ontario.	See remarks.	whole year	not stated.	36 00		New Inspector, and therefore not able to report as fully as the late Inspector did last year. Some reductions made by Inspector in amounts recommended, as compared with last year, as it is not intended that these schools shall always remain pensioners upon this fund. Inspector regrets inability to furnish school rate for 1885-6, and time schools were open in 1885, as the reports for that year came into his hands very defective, owing to death of former Inspector.
		do		32 00		
		do		36 00		
		do		32 00		
		do		36 00		
		do		36 00		
		do		36 00		
		do		48 00		
		8 months		44 00		
		whole year		36 00		
		do		36 00		
		do		40 00		
		do		36 00		
		do		32 00		
		do		96 00		New and poor section.
		do		56 00		
		do		36 00		
		do		36 00		
		8 months		56 00		
		whole year		36 00		
		do		36 00		
		9 months		48 00		
				44 00		
		whole year				
		do		48 00		
		do		80 00		Building school house.
		last 6 months				
		whole year		36 00		
		closed		36 00		
		whole year		32 00		
		do		48 00		
		do		48 00		
		do		32 00		
		do		36 00		
		do		36 00		
		closed				
		whole year		40 00		
		8 months		55 00		
		whole year		83 00		Special aid — difficult for trustees and ratepayers to maintain school.
				1,570 00		

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought forward		.....	2,190 00	.....	.....
Algoma & North-West Ontario.	Keewatin Mills.	.....	.....	.....	114 00		
	1 Lefroy and Plummer.....	.....	.....	.....	42 75		
	2 Lefroy and Thessalon	.....	.....	.....	57 00		
	1 Mills.....	.....	.....	.....	61 75		
	2 McDonald ...	.....	.....	.....	61 75		
	Nipigon.... ..	.....	.....	.....	.....		
	1 Oliver..	.....	.....	.....	61 75	.....	Very small and poor schools.
	2 do	.....	.....	.....	61 75	.....	
	1 Plummer.....	.....	.....	.. ..	57 00		
	1 Prince	.....	.....	.....	57 00		
	1 Rutherford...	.....	.....	.....	47 50		
	1 Rat Portage..	.....	.....	.....	161 50	.....	Large school—two departments—pay $900 for teachers. Municipal machinery not sufficiently advanced to levy rates—depend on subscriptions.
	2 and 4 Rainy River (3 & 5)..	.....	.....	.....	.....	.....	
	Rat Portage Sep. School	.....	.....	.....	80 00		Legislative Grant $29 only, or with Poor School Grant $109. It formerly received $170 to $200 from Manitoba.
	1 Rose & Plummer	.....	.....	.....	42 75		
	1 Sandfield.....	.....	.....	60 00	47 50		
	2 do	.....	.....	60 00	42 75		
	4 do	.....	.....	60 00	76 00	.....	New school.
	Sault Ste. Marie (5 schools)....	.....	.....	.....	142 50		
	1 St. Joseph Is'd	.....	.....	.....	57 00		
	2 do	.....	.....	.....	.....		
	3 do	.....	.....	.....	52 25		
	4 do	.....	.....	.....	52 25		
	5 do	.....	.....	.....	57 00		
	6 do	.....	.....	.....	66 50		
	7 do	.....	.....	.....	57 00		
	1 Shequiandah .	.....	.....	.....	.....		
	1 Spragge.....	.....	.....	.....	.....		
	4 St. Joseph (Mun.)	.....	.....	.... . .	95 00	.....	New school.
	5 do	.....	.....	.....	57 00		
	Sudbury (Chapleau School) ..	.....	.....	.....	.....		
	1 Serpent River.	.....	.....	.....	95 00	... .	New school.
	1 Spanish River.	.....	.....	.....	.....		
	1 Tehkummah..	.....	.....	60 00	47 50		
	2 do ..	.....	.....	60 00	52 25		
	3 do ..	.....	.....	60 00	47 50		
	1 Thessalon	.....	.....	.....	42 75		
	2 do and Kirkwood	.....	.....	.....	52 25		
		Carried forward ...		.....	4,236 50	.....	.....

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	.....	.....	1,570 00		
Algoma & North-West Ontario.	.....	4 months	.....	50 00		
	.....	whole year ...	.....	32 00		
	.....	do	.....	44 00		
	.....	do	.....	44 00		
	.....	do	.....	44 00		
	.....	last half year.	.....	150 00	.....	$100 for 1885 and $50 for 1886.
	.....	whole year ...	.....	44 00		
	.....	7 months.....	.....	44 00		
	.....	whole year ...	.....	44 00		
	.....	last half year.	.....	.....	.....	New school.
	.....	.....	.....	44 00		
	.....	whole year ...	.....	80 00	.....	School partially destroyed by fire.
	.....	lately opened.	.....	200 00	.....	New schools lately opened.
	.....	whole year ...	.....	.....		
	.....	last half year.	.....	32 00		
	.....	whole year ...	.....	36 00		
	.....	do	.....	32 00		
	.....	do	.....	48 00		
	.....	do	.....	112 00		
	.....	.....	.....	44 00		
	.....	.....	.....	40 00		
	.....	.....	.....	40 00		
	.....	.....	.....	40 00		
	.....	.....	.....	44 00		
	.....	.....	.....	48 00		
	.....	.....	.....	55 00		
	.....	.....	.....	40 00		
	.....	.....	.....	56 00		
	.....	.....	.....	56 00		
	.....	.....	.....	44 00		
	.....	.....	.....	50 00		
	.....	.....	.....	.....		
	.....	.....	.....	60 00		
	.....	.....	.....	36 00		
	.....	.....	.....	40 00		
	.....	.....	.....	36 00		
	.....	whole year ...	.....	32 00		
	.....	.....	.....	40 00		
.....	.....	.....	.....	3,451 00		

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought forward ...		.....	4,236 50	.....	.....
Algoma & North-West Ontario.	3 Thessalon and Kirkwood ...	.....	.....	.....	85 50	.....	New school.
	1 Tarbutt	.....	.....	.....	61 75	.....	Only $290 taxes could be collected in 1885; non-resident lands.
	2 do and Laird	.....	.....	.....	71 25	.....	New school.
	1 Victoria	.....	.....	.....	.....		
						4455 00	
Bruce ...	13 Amabel	.....	.....	.....	.....	.....	See page 26 of this Return.
	1 Eastnor	.....	.....	.....	.....	.....	
	2 do	.....	.....	.....	.....	.....	
	3 do	.....	.....	.....	.....	.....	
	4 do	.....	.....	.....	.....	.....	
	5 do	.....	.....	.....	.....	.....	
	6 do	.....	.....	.....	.....	.....	
	1 Lindsay	.....	.....	.....	.....	.....	
	2 do	.....	.....	.....	.....	.....	
	1 St. Edmunds	.....	.....	.....	.....	.....	
Carleton	4 Fitzroy	7 5-100 mills	210 days....	.....	.....		
	1 Goulbourn ...	8 62-100 do	220 do	.....	.....		
	7 Huntley.....	8 3-10 do	177 do	.....	.....		
	5 March	15½ do	215 do	.....	.....		
	12 Marlboro....	8 do	86 do	.....	25 00	.....	Section poor; sparsely settled; accommodation of worst kind.
						25 00	
Dufferin	8 Amaranth	.....	12 months..	.....	42 00	.....	Sections all poor; Inspector would try and get Council to supplement grant.
	11 do	.....	do	.....	35 00		
	1 Luther E....	.....	do	.....	70 00	.....	Nos. 1 and 4, Luther to provide schools for all the children.
	3 do	.....	do	.....	42 00		
	4 do	.....	do	.....	70 00		
	10 do	.....	do	.....	70 00		
	6 Melancthon..	.....	do	.....	.....		
	10 do	.....	do	.....	35 00		
	12 do	.....	do	.....	35 00		
	4 Mulmur.....	.....	do	.....	70 00		
	8 do	.....	do	.....	70 00		
	4 Mono	.....	do	.....	.....		
						539 00	
Durham..	1 Cavan	.....	.....	.....	.....	.....	See page 27 of this Return.
	19 Clarke	.....	.....	.....	.....	.....	
	17 Hope.....	.....	.....	.....	.....	.....	
		Carried forward ...		.....	.....	5,019 00	

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	.....	.....	3,451 00		
Algoma & North-West Ontario.	....	whole year ...	....	52 00		
	....	first half year	.....	44 00		
	....	whole year ...	.....	52 00		
	.....	last half year .	.....	60 00	....	New school.
					3659 00	
Bruce	11 5-10 mills.	121 days.....	20 00	20 00		
	12 5-10 do	211 do	....	....		
	11 5-10 do	187 do	10 00	10 00		
	8 2-10 do	219 do	10 00	10 00		
	8 6-10 do	168 do	15 00	15 00		
	16 4-10 do	131 do	5 00	5 00		
	22 5-10 do	176 do	20 00	20 00		
	13 5-10 do	174 do	10 00	10 00		
	14 9-10 do	185 do	10 00	10 00		
	18 do	153 do	10 00	10 00		
					110 00	
Carleton ..	6 8-10 do	141 do	.....	17 50		
	8 38-100 do	220 do	.....	17 50		
	7½ do	203 do	.....	17 50		
	5⅝* do	215 do	.....	17 50	.....	In 1886 the assessment was near its actual value; in 1885 only about one-third the actual value: 1885, $14,358; 1886, $48,450.
	9½ do	119 do	.....	17 50		
					87 50	
Dufferin.	.....	12 months	40 00	42 00	.....	All poor territory.
	.....	do	30 00	35 00		Amaranth grant by Council voluntary.
	6 mills	do	.....	....	.....	10 Luther and 4 Mulmur have 2 schools each.
	5 do	do	....	35 00		
	7 do	do	.....	....		
	8 do	do	.....	70 00		
	7 do	9 months	100 00	56 00		
	9 do	12 do	.....	.....	.....	Melancthon granted $100 to each school.
	7 do	9 do	100 00	70 00		
	.....	.....	.....	56 00		
	.....	.....	.....	....		
	6 do	12 do	.....	56 00	.....	6 mills for 4 Mono represents the rate for one school only; grant from Tp. Council and subscription with Poor School aid nearly paid salary of teacher in the other school.
					420 00	
Durham ..	4 6-10 mills .	12 do	.....	17 50	.....	1 Cavan is most uninviting in county; assessed value $47,800; teacher's salary, $225.
	7 1-10 do ..	12 do	....	17 50	.....	19 Clarke is smallest section in county; assessed value, $35,350; teacher's salary, $260.
	4 5-10 do ..	7 do	....	17 50	.....	Assessed value, $38,403 teacher's salary, $230.
....	... .	.....	.....	52 50	4,276 50	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought forward ...		.....	.....	5,019 00	.....
Durham..	18 Hope.....	.....	.....	.....	.....		See page 27.
	20 Manvers.....	.....	.....	.....	.....		
Elgin....	21 Southwold...	6 3-10 mills..	12 months..	100 00	100 00	.....	Section only 1,400 acres; cannot be enlarged.
						100 00	
Fron-tenac.			Legal teaching days.				
	1 Clarendon	14 mills . .	204	50 00	24 00		
	2 do	7½ do ..	216	50 00	32 00		
	3 do	7½ do ..	180	50 00	24 00		
	8 do	14½ do ..	183	50 00	24 00		
	1 U Barrie.....	12½ do ..	194	30 00	20 00		
	2 U do	10 do ..	195	30 00	20 00		
	4 do	10 do ..	123	30 00	20 00		
	6 do ...	10 do ..	128	30 00	20 00		
	1 U Oso	10 do ..	191	40 00	28 00		
	2 do	12½ do ..	213	40 00	28 00		
	3 U do	11 do ..	205	40 00	28 00		
	4 do	6 do ..	83 ...	40 00	28 00		
	5 U do	12½ do .	132	40 00	21 00		
	6 do	10 do ..	142	40 00	21 00		
	7 do	15 do ..	86	.....	.....		
	8 U do	25 do ..	210	40 00	28 00		
	1 Palmerston, etc	5 do ..	201	30 00	21 00		
	2 do	18 do ..	146	30 00	21 00		
	3 do	10 do ..	216	30 00	21 00		
	4 do	7 do ..	132	.....	.....		
	5 do	30 do ..	213	30 00	21 00		
	6 do	14 do ..	216	30 00	21 00		
						471 00	
Grey	6 Normanby ..	2 6-10	Register missing ..	.....	10 50	.....	Circ'mstances very trying
	3 Proton	11.....	125 days....	.....	25 00	.....	
	11 do	7.....	111 do	15 00	10 50	.....	Very needy.
						46 00	
Hali-burton.	1 Cardiff	18 mills....	9 months..	.....	28 00	.....	Deficiency to meet expenses.....$40 60
	2 do	13 do	10 do ..	.....	22 40	.....	do 32 68
	3 do	9 do	11 do ..	.....	21 00	.....	do 30 00
	4 do	20 do	12 do ..	.....	28 00	.....	do 39 59
	5 do	27⅓ do	6 do ..	55 00	38 50	.....	do 59 95
	2 Dysart	16 do	12 do .	.....	24 50	.....	do 35 88
	5 do	16 do	8 do .	.....	28 00	.....	do 42 89
	1 Guilford.....	18 do	8 do ..	.. ..	.....	.....	
	2 do	27 do	12 do .	.....	17 50	.....	do 26 33
	1 Glamorgan ..	16 do	8 do .	.....	35 00	.. ....	do 59 76
	2 do ..	28 do	10 do ..	.....	29 40	... ...	do 42 42
	3 do ..	59 do	8 do ..	47 00	32 90	.....	do 60 78
	4 do ..	31½ do	9 do ..	55 00	38 50	.....	do 66 90
	5 do ..	25½ do	7 do ..	.....	35 00	.....	do 53 12
	6 do ..	32 do	12 do ..	53 00	37 10	.....	do 56 26
	1 Harburn	17½ do	8 do ..	.....	.....	.... ..	
	1 Harcourt	43 do	9 do ..	.....	.....	.....	
		Carried forwa r d.		.....	415 80	5,636 00	.....

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	.....	.....	52 50	4,276 50	
Durham ..	4 6-10 do ..	12 months	.....	17 50	.....	Assessed value, $59,340; school-house needs repairs; teacher's salary, $240.
	7 8-10 do ..	12 do	.....	17 50	.....	Assessed value, $34,600; teacher's salary, $250.
					87 50	
Elgin.....	4 8-10 do .	12 months....	75 00	70 00	.....	A neck of land formed by a bend of River Thames.
					70 00	
		Legal teaching days.				
Frontenac.	14 mills	218	.....	.....		
	17½ do	211	.....	.....		
	7½ do	169 ...	40 00	40 00		
	14½ do	208	.....	24 00	.....	Without Poor School aid, rate would be 2c. on $.
	15 do	186	.....	.....		
	10 do	198	20 00	20 00		
	10 do	140	.....	.....		
	12½ do ...	125	.....	.....		
	16 do	201	40 00	40 00		
	25 do	219 . ..	40 00	40 00		
	11 do	195	40 00	40 00		
	5 do	122	40 00	40 00		
	10 do	156	25 00	25 00		
	16 do	218	40 00	40 00		
	14 do	137	25 00	25 00		
	20 do	135	25 00	25 00		
	10 do	213	30 00	30 00		
	18 do	172	30 00	30 00		
	20 do	205	30 00	30 00		
	10 do	200	90 00	90 00	.....	Grant for 1884-5-6; section small and poor; new school-house.
	18 do	216	30 00	30 00		
	18 do	209 ...	30 00	30 00		
					599 00	
Grey	6 4-10	213 days.....	20 00	14 00	... .	Specially in need of aid.
	10.....	193 do	15 00	10 50		
	7 6-10	215 do	15 00	14 00		
					38 50	
Haliburton.	13 mills....	10 months	42 of the 50	33 60	.....	Deficiency $48 15
	12 do	9 do	schools in	35 00	.....	do 50 80
	10 do	7 do	County in	.....		
	17½ do	12 do	need of	44 80	.....	do 64 24
	15 do	7 do	aid; there-	38 50	.....	do 67 33
	26 do	9 do	fore no	27 30	.....	do 39 44
	23 do	7 do	special aid	28 00	.....	do 40 19
	17 do	9 do	can be ex-	15 40	.....	do 22 54
	17½ do	12 do	pected	30 10	.....	do 43 08
	17 do	7 do	from the	30 10	.....	do 43 12
	37½ do	7 do	municipal-	27 30	....	do 39 39
	28½ do	7 do	ity.	35 00	.....	do 68 40
	19 do	7 do	.....	37 80	..... .	do 66 25
	15 do	7 do	....	36 40	.....	do 53 20
	24 do	8 do	.....	39 20	... .	do 67 27
	17 do	11 do	.....	14 00	.....	do 20 89
	28 do	9 do	.....	50 40	.....	do 83 48
.....	.....	.....	.....	522 90	5,071 50	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought forward ...	...	....	415 80	5,636 00	....
Haliburton.	Lutterworth (6 sections)	24 mills....	8 months..	....	210 00	.....	Deficiency to meet expenses. $300 18
	1 Monmouth ..	14 do	11 do ..	....	33 60	.....	do 48 20
	2 do ..	17 do	7 do ..	.....	24 50	....	do 35 28
	3 do ..	28 do	7 do ..	.. ..	28 00	..	do 43 40
	4 do ..	20 do	8 do ..	.....	31 50	....	do 49 88
	5 do ..	59 do	....	....	.....	.....	.....
	1 Minden	15 do	11 months..	.....	21 00	.....	do 31 77
	2 do	18½ do	12 do ..	....	17 50	. .. ..	do 25 90
	3 do	13½ do	10 do ..	.....	38 50	.....	do 55 78
	4 do	20½ do	12 do ..	.....	38 50	.....	do 58 36
	5 do	20¾ do	8 do ..	.....	19 60	.....	do 28 46
	8 do	15 do ...	12 do ..	.....	42 00	.....	do 60 25
	9 do	18 2-5 mills .	10 do ..	....	42 00	.....	do 62 36
	10 do ...	13 1-5 do .	12 do ..	.....	28 00	. .. ...	do 42 81
	1 Snowden	19 mills....	12 do ..	.....	31 50	.....	do 46 45
	4 do	18 do	8 do ..	... ...	23 80	.....	do 34 55
	6 do	18 do	12 do ..	... .	42 00	.....	do 63 76
	7 do	19 do	12 do ..	....	31 50	.....	do 49 14
	2 Stanhope	27 do	12 do .	.....	35 00	.....	do 52 00
	3 do	16½ do	10 do ..	. ...	35 00	.....	do 54 96
	9 do	17 do	8 do ..	.....	35 00	.....	do 50 15
	1 Sherbourne ..	27½ do	8 do ..	.....	31 50	.....	do 46 68
						1255 80	
Grenville.	2 Augusta.....	.....	....	.....	.....	.....	
	20 Edwardsburg	. ...	.....	.....	.....	.....	
	21 Oxford	.....	.....	.....	.....	.....	
Hastings.	1 Bangor.....	.....	.....	.....	.....	.....	
	2 do	....	... .	....	.....	.....	
	5 do	....	..... .	.....	.....	.....	
	1 Carlow and Mayo	.....	.....	.....	.....	.....	
	2 do ..	....	.....	.....	.....	....	
	3 do ..	.....	.....	.....	.....	.....	
	4 do .	.....	....	.....	....	.....	
	5 do ..	....	....	.....	.... ..	.....	
	7 Cashel	....	.....	.....	.....	.....	
	1 Dungannon, etc	.....	....	.....	.....	.....	See pages 26-27 of this Return.
	2 do	.....	.....	.....	.....	.....	
	3 do	....	.....	.....	.....	.....	
	4 do	.....	....	.....	.... ..	.....	
	5 do	.....	.....	.....	....	.....	
	6 do	.....	.....	.....	.....	.....	
	7 do	.....	.....	.....	.....	.....	
	5 Elzevir	.....	.....	.....	.....	....	
	1 Faraday, etc..	.....	.....	.....	.....	.....	
	4 Hungerford ..	....	....	.....	.....	.....	
	20 do	... .	.....	...	.....	.....	
	21 do	.. ..	.....	.....	.....	.....	
	22 do	.....	.....	....	.. ..	.....	
	3 Limerick	.....	....	.....	.....	.....	
	4 do	.....	.. ..	.....	.....	.....	
	1 Monteagle and Herschel....	.....	.....	.....	.....	.....	
	2 do ...	....	.....	.....	.....	.....	
		Carried forward ...	.....	.....	.....	6,891 80	... .

the Poor School Fund for the years 1885, 1886, etc.—*(Continued).*

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	....	....	522 90	5,071 50	
Haliburton.	22 mills ...	7 months....	.....	210 00	.....	Deficiency 8280 49
	16 do	10 do	.....	30 80	.....	do 44 00
	18 do	6 do	.....	33 60	.....	do 65 55
	26 do	8 do	.....	42 00	.....	do 60 00
	22 do	8 do	.....	42 00	.....	do 60 00
	24 do ...	8 do ..	....	70 00	....	do 100 00
	15 do ..	12 do	....	24 50	.....	do 35 00
	19½ do	10 do	.....	.....	.....	
	15 do	12 do	.	35 00	.....	do 50 00
	26½ do	10 do	.....	58 10	....	do 83 00
	12 do	10 do	....	18 90	.....	do 27 85
	15½ do	12 do	....	35 00	.....	do 50 00
	15 do	11 do	.....	30 10	.....	do 43 00
	18 do	12 do	..... .	18 90	..... .	do 27 09
	18 do	12 do	.....	43 40	.....	do 62 00
	20 do	9 do	... .	28 00	.....	do 40 00
	19 do	11 do	.....	42 00	.....	do 60 00
	17 do	12 do	.... ..	34 30	.....	
	15 5-10 mills	11 do	....	29 40	.....	do 42 82
	16 1-10 do	10 do	.....	30 10	.....	do 43 28
	18 1-10 do	8 do	....	34 30	.....	do 49 00
	27 6-10 do	7 do	.....	52 50	... .	do 99 25
					1465 80	
Grenville .	8 4-10 mills.	all year	15 00	15 00	-	
	7 7-10 do	9 months	.....	20 00		
	7 4-10 do	all year	30 00	30 00		
					65 00	
Hastings ..	40 mills	130 days.....	34 77	34 77		
	27 do	114 do	24 12	24 12		
	14 do	96 do	12 53	12 53		
	15 do	212 do	13 44	13 44		
	20 do	210 do	17 90	17 90		
	40 do	217 do	33 77	33 77		
	30 do	130 do	26 84	26 84		
	27 do	212 do	24 18	24 18		
	21 1-10 mills.	207 do	18 80	18 80		
	15 mills	180 do	13 44	13 44		
	15 do	.....	17 00	17 00		
	18 do	124 days.....	16 12	16 12		
	22 do	149 do	19 70	19 70		
	25 do	211 do	23 27	23 27		
	22 do	200 do	19 70	19 70		
	20 do	209 do	17 91	17 91		
	31 do	218 do . ..	25 00	25 00		
	5 do	96 do	4 48	4 48		
	2 do	100 do	30 00	21 00		
	8 75-100 mills	150 do	30 00	21 00		
	2 34-100 cts .	100 do	30 00	21 00		
	1½ cents	210 do	30 00	21 00		
	14 6-10 mills.	212 do	13 00	13 00		
	13 mills	215 do	11 64	11 64		
	8 do	170 do	7 61	7 61		
	6½ do . .	160 do	5 82	5 82		
.....	....	.....	.....	485 04	6,602 30	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought	*forward* ...	.....	.....	6,891 80	.....
Hastings.	3 Montreagle and Herschel	.....	.....	.....			
	4 do	.....	.....	.....			
	5 do ..	.....	.....	.....			
	6 do	.....	.....	.....			
	7 do	.....	.....	.....			
	1 Herschel and Faraday... .	.....	.....	.....	.....	.....	See 1 Faraday.
	2 McClure	.....	.....	.... ..	.....	.. ....	See Wicklow.
	1 Tudor.....	.....	.....	.....	.....	.....	
	2 do	.....	.....	.....			
	3 do	.....	.....	.....	.....	.....	See 3 Limerick.
	4 do	.....	.....	.....	.....	.....	See 4 Limerick.
	5 do	.....	.....	.....			
	7 do	.. ..	.....	.....	.... ..	.....	See 7 Cashel.
	9 do	.....	.....	.....			
	30 Tyendinaga..	....	.....	.....			
	2 Wicklow	.....	.....	... .			
	4 do	.....	.....	.....			
	1 Wollaston	....	.....	.....			
	6 do	.....	.....	.....			
	8 do	.....	.....	.....			
	10 do	.....	.....	.....			
Kent....	1 Dover	4 1-5 mills to raise, $253.93	Year	.....	35 00	.....	Grant greatly needed.
	1 U Tilbury & Raleigh...	67-10 mills to raise, $161.22 23-10 mills to raise, $69.	Year	45 00	35 00		
						70 00	
Leeds, (No. 1, etc.)	6 & 8 Burgess, N. and Crosby...	....	.....	.....	.....	.....	See page 27 of Return. Repairing School House —section very weak.
	11 Crosby, N...	.....	.....	.....	17 50	....	Very poor section.
	12 Escott.....	.. ..	.....	.....	.....		
	2 Ft. Lansdowne	.....	.....	20 00	14 00		
	7 do	.....	.....	20 00	28 00		
	1 & 3 Ft. Yonge, etc.....	.....	.....	24 00	16 80		
	5 Ft. Yonge....	.....	.....	14 00	9 80		
						86 10	
Lanark..	13 Bathurst.....	15 mills.....	Whole year.	.....	14 00		
	4 Burgess, N....	7 do	do	.....	.....		
	1 Dalhousie....	8 5-10 mills	do	.....	35 00		
	5 do	12 5-10 do	do	.....	.....		
	8 do	11 2-10 do	do	.....	49 00		
	9 do	12 1-10 do	do	.....	14 00		
	1, 4, 5 & 6, Darling.....	12 to 16 do	do	.....	84 00		
	1, 2, 3, 4, Lavant	5 to 13½ do	No. 1 ½ year, others, year.	.....	59 50		
	7 Montague.....	13¾ do	Whole year.	.....	14 00		
	8 do	13½ do	do	.....	14 00		
		Carried	*forward* ...	.....	283 50	7,047 90	....

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	.....	.....	485 04	6,602 30	
Hastings...	9 mills...	62 days.....	8 06	8 06		
	14 do	164 do	12 53	12 53		
	.....	.....	.....	.....		
	18 do	157 do	16 10	16 10		
	8 1-5 mills .	89 do	7 61	7 61		
	.....	.....	.....	.....		
	.....	.....	.....	.....		
	20 do ...	180 do	17 91	17 91		
	32 6-10 mills.	207 do	29 00	29 00		
	.....	.....	.....	.....		
	.....	.....	.....	.....		
	13 4-10 do	159 do	11 64	11 64		
	.....	.....	.....	.....		
	12 mills ...	206 do	10 74	10 74		
	11 1-10 mills.	220 do	21 00	21 00		
	24 mills	206 do	24 44	24 44		
	30 do ...	88 do	26 83	26 83		
	25 do ...	213 do	22 40	22 40		
	12 7-10 mills.	220 do	11 64	11 64		
	15 7-10 do	167 do	14 32	14 32		
	12 mills	180 do	10 74	10 74		
					730 00	
Kent	3¾ mills to raise $250.	Year	50 00	35 00	.....	Struggling section.
	4½ mills to raise $113. 5 4-10 mills to raise $167.99	Year	50 00	35 00	.....	do
					70 00	
Leeds, (No. 1, etc.)	.....	.....	20 00	10 50		
		.....	20 00	14 00		
		.....	10 00	14 00		
		....	20 00	14 00		
		....	20 00	14 00		
		.....	24 00	16 80		
		.....	15 00	10 50		
					93 80	
Lanark	15 mills.....	Whole year...	.....	14 00		
	14 do	do ..	30 00	30 00	.....	Large scattered section, assessed at about $20,000. Repairs to School House to be made.
	8 4-10 mills	do ..	.....	14 00		
	13 do	Teacher died in October.	.....	14 00		
	7 3-10 do	Whole year ..	.....	28 00		
	13 do	do from Feb.	50 00	78 00	.....	Scattered section. Repairs to School House.
	7 5-10 to 15	Whole year except No. 5.	.....	70 00		
	9½ to 12½ mills.	Whole year ..	.....	52 50		County Council at last session voted $250 to the poor schools.
	12¾ mills. ..	do ..	.....	14 00		
	12½ do	do ..	.....	14 00		
.....	.....	.....	.....	328 50	7,495 10	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought forward ...		.....	283 50	7,047 90	.....
Lanark ..	9 Montague	21 1-10 mills.	whole year..	.....	14 00		
	10U. do	19 3-5 do	do	.....	14 00		
	11 do	12 1-10 do	do	.....	14 00		
	14 do	20 4-5 do	do	.....	14 00		
	7 Pakenham	10 6-10 do	do	.....	14 00		
	2 Sherbrooke, N.	10 2-10 do	do	.....	14 00		
	Sherbrooke, S., (5 schools)....	6 to 9 do	do	.....	46 86		
	5 do	7 4-10 do	do	.....	.....		
						414 36	
Lennox & Addington.	1 Denbigh, etc..	15 mills	197 days....	30 00	21 00		
	2 do	15 do	214 do	50 00	35 00		
	4 do	Omitted....	110 do	30 00	21 00		
	5 do	7 mills	219 do	50 00	35 00		
	7 do	20 do	72 do	35 00	24 50	.....	New school.
	1 Kaladar	6⅕ do	106 do	30 00	21 00		
	2 do	16 do	196 do	35 00	24 50		
	3 do	18 do	104 do	35 00	24 50	.....	New school.
	4 do	12 do	210 do	30 00	21 00		
	8 do	6 do	152 do	30 00	21 00		
	10 do	5 do	141 do	35 00	24 50		
	11 Sheffield	12 do	8/ do	30 00	21 00		
	13 do	4 do	199 do	20 00	14 00		
	14 do	5 do	136 do	25 00	17 50		
	16 do	6 do	124 do	30 00	21 00		
						346 50	
Muskoka, (West Victoria)	2 Brunel	12 do	9 months ..	.....	102 00		
	3 do	20 do	9 do ..	.....	102 00		
	4 do	9 do	9 do ..	.....	102 00		
	5 do	7 do	9 do ..	.....	102 00		
	6 do	7 do	9 do ..	.....	102 00		
	1 Chaffey	7½ do	Year	.....	150 00		
	3 do	6½ do	do	.....	102 00		
	4 do	14½ do	do	.....	70 00		
	5 do	11½ do	do	.....	102 00		
	6 do	6 3-10 mills	9 months ..	.....	102 00		
	7 do	16½ mills....	Year	.....	102 00		
	8 do	11 do	7 months ..	.....	102 00		
	9 do	10½ do	9 do ..	.....	102 00		
	1 Draper	11½ do	Year	.....	35 00		
	2 do	11½ do	do	.....	35 00		
	3 do	9 do	do	.....	35 00		
	4 do	11½ do	do	.....	35 00		
	5 do	14½ do	do	.....	35 00		
	6 do	9½ do	9 months ..	.....	35 00		
	7 do	12½ do	9 do ..	.....	35 00		
	2 Franklin	7½ do	6 do	.....	102 00		
	3 do	12½ do	Year	.....	102 00		
	Macauley Tp. (7 Schools)....	15 do	Year	.....	245 00		
	1 McLean	7 do	do	.....	21 00		
	1 Oakley	9⅜ do	do	.....	52 50		
	2 Ridout	5 do	do	.....	70 00		
	3 do	16 do	9 months ..	.....	70 00		
		Carried forward ...		.....	2249 50	7808 76	.....

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
....	.....	... .	.....	328 50	7,495 10	
		Whole year				
Lanark....	16⅔ do	from Feb...	.....	14 00		
	14⅔ do	whole year...	....	14 00		
	14 do	do ..	.....	14 00		
	16⅔ do	do ..	.....	14 00		
	18 do	do ..	.....	14 00		
	19 5-10 mills	do ..	.. ..	14 00		
	6 7-10 to 8.	do ..	.....	49 15	....	Building School House
	8 mills.....	.....	.....	14 00		
					475 65	
Lennox & Addington.	.....	135 days.....		24 50		
	.....	199 do		35 00		
	.....	112 do		21 00		
	... .	213 do		35 00		
	.....	170 do		28 00		
	6½ mills	110 do		21 00		
	15 do	219 do		24 50		
	3½ do	105 do	8275	24 50		
	15 do	207 do		21 00		
	7½ do	210 do		21 00		
	6½ do . ..	165 do		28 00		
	9½ do .. .	110 do		21 00		
	9½ do	110 do		17 50		
	6 do	127 do		17 50		
	7½ do	136 do		21 00		
					360 50	
Muskoka, (West Victoria).	9½ mills....	9 months	....	70 00		
	7½ do	9 do	....	70 00		
	12 do	9 do	.....	70 00		
	9 do	9 do	.....	70 00		
	14 do	9 do	.....	70 00		
	8½ do	Year	.....	70 00		
	16½ do	9 months	.....	70 00		
	11½ do	9 do	.....	70 00		
	6½ do	9 do	....	70 00		
	4 do	9 do	.....	70 00		
	5½ do	9 do	....	70 00		
	20 do	9 do	... .	70 00		
	9 do	9 do	.....	70 00		
	11½ do	Year	.....	35 00		
	11½ do	do	.....	35 00		
	9 do	do	.....	35 00		
	11½ do	do	... .	35 00		
	14½ do	do	.....	35 00		
	9½ do	9 months	.....	35 00		
	12½ do	9 do	.....	35 00		
	7½ do	6 do	.....	70 00		
	15 do	12 do	.....	70 00		
	15 do	Year each....	.....	245 00		
	7 do	Year	.....	35 00		
	8 do	7 months	.....	52 50		
	5 do	Year	.....	70 00		
	16 do	9 months	.....	70 00		
....	.....	.....	....	1767 50	8332 25	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought	*forward* ...	.....	2249 50	7808 76	.....
Muskoka, (West Victoria)	1 Ryde.	16⅔ mills....	Year	.....	35 00		
	2 do	10 do	do	.....	35 00		
	3 do	15 do	9 months ..	.....	35 00		
	4 do	17½ do	9 do ..	.....	35 00		
	5 do	6 do	9 do ..	.....	35 00		
	7 do	.....	.....	.....	.....	.....	New section.
	1 Sinclair	6 do	9 do ..	.....	102 00		
	2 do	7½ do	9 do ..	.....	102 00		
	1 Stephenson...	8 1-10 mills	Year	.....	28 00		
	2 do ..	10 5-10 do	do	.....	28 00		
	3 do ..	9 5-10 do	do	.....	21 00		
	4 do ..	14 4-10 do	do	.....	21 00		
	5 do ..	10 do	do	.....	35 00		
	8 do ..	8 4-10 do	9 months ..	.....	28 00		
	9 do ..	17 2-10 do	Year	.....	28 00		
	2 Stisted.....	15 3-10 do	do	.....	102 00		
	2 U. do	9 do	do	.....	102 00		
	3 do	.....	.....	.....	32 00		
	4 do	12 7-10 do	Year	.....	102 00		
	5 do	16 6-10 do	do	.....	70 00		
						3225 50	
Muskoka. (South Simcoe.)	1 Cardwell	.....	.....	.....	.....		
	2 do	14 mills.....	all year	51 00	49 00		
	1 Gibson.....	19 do	do	200 00	84 00		
	1 Humphrey ...	11 do	do	51 00	49 00		
	2 do ...	10 do	do	51 00	49 00		
	3 do ...	9 do	8 months...	51 00	49 00		
	1 Medora	8 do	all year	42 50	49 00		
	2 do	9 do	do	42 50	49 00		
	3 do	11 do	do	42 50	49 00		
	4 do	10 do	7 months...	70 00	70 00		
	5 do	11 do	6 do ..	42 50	49 00		
	2 Monck.....	9 do	all year	17 00	28 00		
	4 do	12½ do	8 months ...	51 00	49 00		
	6 do	.....	.....	51 09	49 00		
	2 McMurrich ..	.....	.....	.....	70 00		
	Morrison School Bd. (5 schools.)	14 do	all year	204 00	245 00		
	1 Muskoka.....	16 do	do	42 50	.....		
	2 do	8 do	do	42 50	49 00		
	3 do	13 do	do	42 50	49 00		
	5 do	17 do	8 months ...	42 50	124 00	.....	$75 special—school-house burned.
	6 do	13 do	all year	42 50	49 00		
	7 do	15 do	do	42 50	42 00		
	1 Watt	12 do	do	42 50	49 00		
	2 do	11 do	do	42 50	49 00		
	3 do	14 do	do	42 50	49 00		
	4 do	12 do	8 months ...	42 50	49 00		
	5 do	12 do . ..	all year.....	42 50	49 00		
	1 Wood	10 do	8 months ...	51 00	52 50		
						1597 50	
Northumberland.	26 Brighton	10 mills	8½ months ..	40 00	28 00		
						28 00	Very poor section.
		Carried	*forward* ...	.....	.....	12659 76	....

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
	.....	.....	.....	1767 50	8332 25	
Muskoka, (West Victoria).	21½ mills....	4 months	.....	35 00		
	9 do	Year	.....	35 00		
	15 do	5 months	.....	70 00		
	12 do	9 do	.....	35 00		
	8 do	9 do	.....	35 00		
	20 do	9 do ...	.....	70 00		
	6 do	9 do	.....	70 00		
	7½ do	9 do	.....	70 00		
	15 do ...	Year	.....	35 00		
	15 5-10 mills	do	.....	35 00		
	9 5-10 do	do	.....	35 00		
	12 7-10 do	do	.....	35 00		
	10 do	9 months	.....	35 00		
	8 do	9 do	.....	35 00		
	21 do	Year	.....	35 00		
	12 do	do	.....	70 00		
	9 do	do	.....	70 00		
	.....	.....	.....	.....		
	4 4-10 do	Year	.....	70 00		
	7 9-10 do	9 months	.....	70 00		
					2712 50	
Muskoka. (S. Simcoe).	.....	.....	60 00	45 50		
	15 mills	all year	.....	.....		
	17½ do	do	300 00	87 50	.....	Local aid, $300, from private subscriptions.
	13 do	do	60 00	45 50		
	12½ do	do	60 00	45 50		
	10½ do	9 months.....	60 00	28 00		
	7 do	all year	50 00	45 50		
	10 do	do	50 00	45 50		
	13 do	8 months.....	50 00	45 50		
	12½ do	do	50 00	31 50		
	11½ do	do	50 00	31 50		
	9½ do	all year	50 00	31 50		
	13 do	9 months.....	50 00	45 50		
	13½ do . .	all year	50 00	45 50		
	.....	.....	.....	.....		
	14 do	all year	250 00	280 00	.....	$42 to each school and $70 special.
	13 do	do	50 00	35 00		
	11 do	do	50 00	45 50		
	15 do	do	50 00	45 50		
	17½ do	7 months.....	50 00	31 50		
	11 do	all year	50 00	45 50		
	15 do	do	50 00	52 50		
	13 do	do	50 00	45 50		
	10 do	do	50 00	45 50		
	15 do	do	50 00	45 50		
	13 do	8 months.....	50 00	45 50		
	14 do	all year	50 00	45 50		
	13 do	8 months.....	50 00	45 50		
					1382 50	
Northumberland.	8 mills	8½ months....	40 00	35 00		
					35 00	
	.....	.....	.....	.....	12,462 25	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought forward ...		.....	.....	12659 75	.....
Ontario..	8 Mara.....	16 mills	whole year..	75 00	52 50		A large portion of these sections swamp and uncleared land.
	9 do	14 do	do ..	75 00	52 50	....	
	10 do	15 do	do ..	75 00	52 50		
	1 Rama	20 do	do ..	75 00	52 50	.....	Much Indian land—exempt from taxes.
	1 do Pub.Sep.	13 do	do ..	75 00	52 50		
	2 Rama	12 do	do ..	75 00	52 50		
	3 do	25 do	do ..	75 00	52 50	.....	Lumbering district—land not much cleared.
	4 U. Rama	22 do	do ..	75 00	52 50		
	1 do	18 do	do ..	75 00	52 50		
						472 50	
Perth ...	10 Ellice	3 1-5 mills..	whole year..	.....	.....		
	15 Mornington..	5 do ..	do ..	50 00	80 00	... .	
	12 Wallace	6 3-10 do ..	do ..	12 00	32 00	.....	Exceedingly weak sect'n.
						112 00	Section weak.
Nipissing	2 Bonfield	.....	.....	.....	35 00	.....	
	1 Ferris	.....	.....	.....	35 00	.....	
	1 Lyall & Murchison.....	.....	.....	.....	35 00	.....	Unorganized townships.
	1 Mattawa	.....	.....	.....	70 00	.....	
	1 McKim	.....	.....	.....	35 00	.....	
	1 Springer.....	.....	.....	.....	70 00	.....	
	1 Widdifield....	.....	.....	.....	70 00	.....	
						350 00	
Peterboro'..	2 Anstruther ...	16 mills	6 months ...	25 00	20 00	.....	These schools are in poor municipalities, where special aid can scarcely be looked for.
	7 Belmont.....	14 do	year	.....	.....		
	8 do	19 do	6 months ...	.....	.....		
	2 Burleigh.....	6 do	6 do ...	.....	20 00		
	3 Chandos.....	29 do	year ...	.....	20 00		
	4 do	25 do	9 months...	.....	20 00		
	5 do	26 do	6 do ...	.....	20 00		
	7 Galway.....	31 do	7 do ...	.....	24 00		
	6 Harvey.....	16 do	6 do ...	.....	.....		
	10 Methuen	25 do	year	.....	16 00		
	11 do	14 do	6 months...	.....	16 00		
	13 do	25 do	6 do ...	.....	24 00		
						180 00	
Parry Sound.	1 Armour	11 do	Year	.....	47 50		
	2 do	8 do	do	.....	42 75		
	3 do	14 do	do	.....	42 75		
	4 do	10 do	6 months ..	.....	28 50		
	5 do	10 do	.....	.....	.....		
	1 Chapman & Croft.....	7 do	9 months ..	.....	38 00		
	2 do	10 do ..	Year	.....	42 75		
	3 do	8 do	do	.....	42 75		
	1 Croft	20 do ...	9 months ..	.....	47 50		
	Christie School Board.....	.....	.....	.....	114 00	.....	Three schools.
	1 Foley	5 do	Year	.....	47 50		
	2 do	10 do	7½ months..	.....	33 25		
	3 do	10 do	4 do	.....	47 50		
	4 do	5 do	6 do	.....	42 75		
		Carried forward ...		.....	617 50	13774 26	.....

the Poor School Fund for the years 1885, 1886, etc. –(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	.....	.....	.....	12,462 25	
Ontario ...	16 mills	whole year ...	.....	52 50		
	18 do	do ...	.....	52 50		
	17 do	do ...	.....	52 50		
	26 do	do ..	75 00	52 50		
	15 do	do ...	75 00	52 50		
	14 do	do ...	75 00	52 50		
	23 do	do ...	75 00	52 50		
	24 do	do ...	75 00	52 50		
	19 do	do ..	75 00	52 50		
					472 50	
Perth	5½ mills ...	whole year ...	.....	50 00	.....	A weak section.
	5 do ...	do ..	.....	70 00	.....	Only 1,100 acres.
	4½ do ...	do ..	.....	28 00	.....	Only 1,700 acres.
					148 00	
Nipissing ..	.....	.....	.....	35 00		
	.....	.....	.....	35 00		
	.....	.....	.....	35 00		
	.....	.....	.....	70 00		
	.....	.....	.....	35 00		
	.....	.....	.....	70 00		
	.....	.....	.....	70 00		
					350 00	
Peterboro'.	16 mills	6 months	.....	20 00	.....	Not a moderately wealthy section within the bounds, and can scarcely be expected to make special grants to the poorer sections.
	14 do	6 do	.....	20 00		
	27 do	9 do	.....	20 00		
	7 do	9 do	.....	.....		
	31 do	12 do	.....	30 00		
	27 do	12 do	.....	20 00		
	29 do	10 do	.....	20 00		
	35 do	12 do	.....	40 00		
	19 do	12 do	.....	20 00		
	16 do	6 do	.....	20 00		
	20 do	.....	.....	.....	.....	Building new school house.
	25 do	6 months ...	.....	20 00		
					230 00	
Parry Sound...	9 do	Year	.....	36 00		
	6 do	do	.....	36 00		
	13 do	do	.....	36 00		
	8 do	6 months	.....	32 00		
	14 do	.....	.....	40 00	.....	New school opened 1887.
	9 do	11½ months .	.....	32 00		
	6 do ...	8 do	.....	32 00		
	12 do	Year	.....	36 00		
	20 do	6 months....	.....	47 00		
	.....	about 7 months [each.	.....	96 00	.....	Three schools.
	10 do	Year	.....	36 00		
	10 do	do	.....	36 00		
	15 do	do	.....	36 00		
	5 do	Not open	.....	28 00	.....	Moving school.
.....	.....	.....	.....	559 00	13,662 75	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought	*forward* ...	.....	617 50	13774 26	.....
Parry Sound.	1 French River .	*	.....	.....	.....	.....	*Ont. Lumber Co. pay.
	1 Ferrie, etc....	15 mills	Year	.....	57 00		
	4 Ferguson & McDougall ...	.....	.....	.....	.....		
	1 Gurd & Pringle	8 mills	Year	.....	57 00		
	1 Himsworth ...	7½ do	10 months..	.....	52 25		
	2 do & Gurd.	1 cent	Year	.....	95 00		
	3 do & Ferrie	.....	.....	.....	.....	.....	New school.
	4 do do	.....	.....	.....	.....	.....	do
	1 Hagerman & Croft	15 mills	Year	.....	47 50		
	2 do	25 do	do	.....	47 50		
	3 do	15 do	do	.....	47 50		
	1 Joly	15 do	do	.....	95 00	.....	New school.
	1 Lount	10 do	6 months.	.....	95 00	.....	New school.
	2 do	12 do	.....	.....	.....	.....	Building.
	1 Machar	12 do	.....	.....	42 75		
	2 do	30 do	.....	.....	75 00	.....	New school.
	3 do	.....	.....	.....	.....	.....	Building school house.
	1 McConkey, etc.	.....	.....	.....	.....		
	1 Monteith	22½ mills ...	6 months ..	.....	47 50		
	2 do	15 do	.....	.....	66 50		
	3 do	15 do	.....	.....	.....		
	1 McMurrich ...	14 do	Year	.....	47 50		
	2 U do ...	15 do	8 months ..	.....	47 50		
	2 do ...	10 do	Year	.....	42 75	.....	New school.
	4 do ...	9 do	do	.....	95 00		
	2 McDougall ...	8 do	10 months..	.....	38 00		
	3 do ..	5 do	Year	.....	38 00		
	4 do ..	10 do	do	.....	47 50		
	McKellar School Board	14 do	do	.....	190 00	.....	4 schools.
	1 McKenzie	30 do	.....	.....	.....	.....	Building.
	1 Nipissing.....	17½ do	do	.....	47 50		
	2 do	12½ do	do	.....	95 00	.....	New school.
	3 do	.....	.....	.....	.....	.....	New school.
	1 Patterson	40 do	4 months .	.....	71 25	.....	New school.
	1 Perry	10 do	Year	.....	47 50		
	2 do	1 cent.....	10½ months.	.....	42 75		
	3 do and McMurrich.	10 mills	11 do	.....	47 50		
	4 do	12 do	9 do	.....	47 50		
	5 do	12 do	Year	.....	61 75		
	6 do and Bethune....	.....	.....	.....	57 00		
	1 Ryerson.....	15 mills	Year	.....	47 50		
	2 do	5 do	do	.....	47 50		
	3 do	10 do	do	.....	47 50		
	4 do	.....	.....	.....	47 50		
	1 Spence, etc...	11 do	Year	.....	47 50		
	2 do ...	12 do	do	.....	47 50		
	3 do ...	15 do	do	.....	76 00	.....	New school.
	1 Strong, etc..	.....	.....	.....	47 50		
	2 do ...	11½ do	Year	.....	47 50		
	3 do ...	8 do	6 months ..	.....	47 50		
	4 do ...	10 do	.....	.....	.....	.....	New school.
	5 do & Joly	.....	.....	.....	57 00		
	1 & 2 Wallbridge	*	.....	.....	66 50	.....	G. B. C. Lumber Co. pay.
						3134 00	
		Carried	*forward* ...	.....	.....	16908 26	.....

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
				559 00	13662 75	
Parry Sound		6 months		40 00		New section.
	20 mills	Year		40 00		
		do		36 00		
	8 do	do		40 00		
	8 do	do		40 00		
	8 do	do		40 00		
	10 do	8 months		72 00		
	22 do	9 do		40 00		
	20 do	Year		40 00		
	27 do	do		40 00		
	17½ do	do		40 00		
	15 do	do		60 00		
	12 do	6 months				
				40 00		School house being built.
	9½ do	6 months		32 00		
	25 do	10 do		60 00		
		6 do		48 00		
		10 do		72 00		
	No levy	Not open		28 00		Not open.
		Year		60 00		
	10 mills			40 00		Building.
	12½ do	Year		36 00		
	15 do	do		60 00		
	10 do	7 months		24 00		
		Year		48 00		
	8 do	7½ months		32 00		
	12 do	9 do		32 00		
	10 do	Year				
	20 do	Year each		160 00		4 schools.
	28 do	7 months		69 00		
	15 do	Year		36 00		
	16 do	do		48 00		
	35 do	6 months		44 00		
	15 do	Year		48 00		
	11 do	do		36 00		
	1 cent	10 months		32 00		
	16 do	10 months		36 00		
	7 do	Year		36 00		
	8½ do	8 months		40 00		
		7 months		40 00		
	10 do	Year		36 00		
	5½ do	do		36 00		
	11 do	do		36 00		
		do		36 00		
	11 do	do		40 00		
	12 do	do		40 00		
	17½ do	10 months		60 00		
		Year		36 00		
	16 do	do		36 00		
	5 do	do		36 00		
	5 do	do		48 00		
		do		40 00		
	*	11 months		52 00		*G. B. C. Lumber Co. pay.
					2847 00	
					16509 75	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
			Brought forward ...	.....	.....	16908 26	.....
Renfrew.	7 Admaston		.....	30 00	70 00	.....	All the townships uniformly poor; out of the question to give special aid.
	9 do		.....	30 00	42 00		
	1 Algona		.....	.....	28 00		
	4 do		.....	.....	24 50		
	1 Boget		.....	.....	42 00		
	5 do		.....	.....	28 00		
	6 do		.....	.....	24 50		
	9 Bromley		.....	.....	70 00		
	1 Brudenell		.....	.....	59 50		
	2 do		.....	.....	31 50		
	3 do		.....	.....	52 50		
	4 do		.....	.....	52 50		
	2 Buchanan		.....	.....	.....		
	2 Grathan		.....	.....	56 00		
	3 do		.....	.....	70 00		
	6 do		.....	.....	59 50		
	7 do		.....	.....	52 50		
	9 do		.....	.....	140 00		
	1 Griffith		.....	.....	21 00		
	1 Hagarty		.....	.....	24 50		
	2 do		.....	.....	52 50		
	3 do	About 1c.	.....	.....	28 00		
	7 do	on the $.	.....	.....	70 00		
	11 do ...		.....	.....	70 00		
	1 Head		.....	.....	52 50		
	4 do		.....	.....	.....		
	1 Matawatchan.		.....	.....	35 00		
	1 Petawawa		.....	.....	.....		
	2 do		.....	.....	52 50		
	4 Radcliffe and Raglan		.....	.....	28 00		
	7 do		.....	.....	84 00		
	8 do		.....	.....	52 50		
	1 Rolph		.....	.....	28 00		
	3 B do		.....	.....	52 50		
	3 R do		.....	.....	.....		
	6 do		.....	.....	42 00		
	2 Stafford		.....	.....	.....		
	7 do		.....	.....	.....		
	1 Sebastopol ...		.....	.....	52 50		
	2 do ...		.....	.....	45 50		
	4 do ...		.....	.....	45 50		
	3 Wilberforce ..		.....	.....	42 00		
	6 do ..		.....	.....	42 00		
						1823 50	
Simcoe ..	13 & 17 Essa & Tecumseth ...	13 mills....	year	90 00	84 00		
	5 Innisfil	15 do	do	.....	.....		
						84 00	
Separate Schools	6 & 7 Artemesia.	7 do	half year ...	.....	.....		
	3 Alfred	6 do	.....	.....	.....		
	1 Bonfield	20 do	.....	.....	.....		
	6 Burgess, N. ..	8 do	.....	.....	.....		
	7 Cambridge ...	7 do	.....	.....	60 00		
			Carried forward ...	.....	60 00	18815 76	.....

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	.....	.....	.....	16509 75	
Renfrew...		.....	30 00	84 00		
		.....	30 00	28 00		
		.. ..	.....	42 00		
		....	....	63 00		
		.....	.....	.....		
		.....	... .	42 00		
		.....	.....	.....		
		.....	....	56 00		
		... .	....	.. ..		
		.....	.....	.....		
		.....	... .	70 00		
		.....	.....	.....		
		.....	.....	52 50		
		.....	.....	42 00		
		.....	.....	56 00		
		.....	.....	.....		
		.....	.....	56 00		
		.....	.....	84 00		
		.....	.....	.....		
		.....	.....	70 00		
		.....	.....	52 50		
	About 1c.	.....	.....	.....		
	on the $.	.....	.....	70 00		
		....	....	70 00		
		.....	.....	42 00		
		.....	.....	35 00		
		.....	.....	70 00		
		.....	....	24 50		
		.....	.....	52 50		
		.....	.....	52 50		
		.....	.....	42 00		
		.....	....	70 00		
		.....	.....	.....		
		.....	.....	56 00		
		.....	.....	63 00		
		.....	.....	49 00		
		.....	.....	56 00		
		... .	....	45 50		
		.....	.....	70 00		
		. .....	.....	21 00		
		.....	.....	70 00		
		.....	.....	.....		
		.....	.....	42 00		
					1799 00	
Simcoe	14 mills....	Year	150 00	70 00		
	19 4-5 mills.	do	50 00	42 00	....	Become very poor. Business left Belle Ewart.
					112 00	
Separate Schools..	7 mills....	½ year.	.. ..	50 00	....	Needy Separate Schools.
	6 do	.....	.. ..	40 00		
	18 do	.....	.....	105 00		
	8 do	.....	.....	40 00		
	6 do	.....	.....	35 00		
.....	. . . ...	.....	.....	270 00	18420 75	

RETURN giving a detailed statement of the expenditure from

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Poor School grant, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
		Brought forward			60 00	18815 76	
Separate Schools.	3, 4 & 10 Caledonia	8 do					
	2 Edwardsbr'gh	7 do					
	2 Flamboro, W.	3½ do	All year.....				
	2 Hullett	2½ do	do				
	4 Hawkesb'y, E	12 1-10 mills					
	12 do	32 mills.....					
	15 do	15 do					
	16 do	16 do					
	3 Holland	7 do	All year.....				
	7 Kitley	5 do					
	4 Longueil W..	.....					
	14 Lancaster ...	4 mills...					
	3, 4, & 5 Moore .	.....					
	15 Nepean	.....					
	10 Normandy ..	.....	all year				
	1 Nichol	3 mills....	do				
	10 Otonabee....	9 do					
	1 Osgoode.....	9 1-17 mills					
	2 Papineau....	.....					
	8 Peel	4 mills....	204 days..				
	7 PlantagenetS	5 do					
	10&17 Richmond	6 do					
	14 Sydenham...	.....					
	7 Vespra	8½ do	211 days....				
	13 Westminster.	2½ do	207 do				
	Weston	3 do	200 do				
	1 York.....	5 do					
	4 Yonge and Escott	.....					
						60 00	
Victoria.	1 Carden.....	12 mills	9 months ..		35 00		
	2 do	25 do	Year		35 00		
	3 do	12 do	do		28 00		
	4 do	28 do	do		28 00		
	5 do	17 do	7 months ..		35 00		
	6 do	10 2-10 mills	9 do ..		35 00		
	7 do	24 mills	9 do ..		35 00		
	1 Dalton	22 do	Year		35 00		
	2U do	16 2-10 mills	9 months ..		.....		
	3 do	21 mills	Year ...		35 00		
	4 do	35 do	.....		35 00		
	5 do	19 do	6 months ..		35 00		
	1 Somerville...	9 1-10 mills	211 days....		35 00		
	5 do ...	3 3-10 do	206 do		35 00		
	6 do ...	10 7-10 do	214 do		35 00		
	9 do ...	9 3-10 do	207 do		35 00		
	5 Verulam	5 2-10 do	207 do		21 00		
	12 do	7 do	197 do		21 00		
						553 00	
Wellington	6 Arthur.....	5 4-10 do	214 do		70 00		
	3 Maryboro'...	6½ do	214 do		.....		
	15 do ...	10 54-100 do	211 do		100 00		
						170 00	
		Total 1885			.....	$ 19598 76	

the Poor School Fund for the years 1885, 1886, etc.—(*Continued*).

County or District.	Rate on the dollar, 1886.	Length of time School was open, 1886.	Aid, if any, from Co. or Tp. Municipality, 1886.	Poor School grant, 1886.	Total.	Remarks.
			$ c.	$ c.	$ c.	
.....	.....	.....	.....	270 00	18420 75	
Separate Schools.	7 do	.....	.....	35 00		
	7 do	.....	.....	30 00		
	2 3-5 mills.	All year.....	.....	55 00		
	2 4-10 do	209 days.....	.....	25 00		
	11 mills ..	.....	.....	30 00		
	25 do	.....	.....	45 00		
	12 do	.....	.....	35 00		
	11 do	.....	.....	40 00		
	6 do	All year	.....	40 00		
	6 mills....	.....	.....	35 00		
	18 do	.....	.....	45 00		
	4½ do	.....	.....	35 00		
	.....	.....	.....	55 00		
	7 mills. ..	.....	.....	45 00		
	.....	194 days.....	.....	25 00		
	4 mills....	all year	.....	40 00		
	8 do	.....	.....	35 00		
	8½ do	.....	.....	30 00		
	10 do	.....	.....	40 00		
	4 do	203 days.....	.....	40 00		
	8 do	.....	.....	40 00		
	5 do ...	.....	.....	30 00		
	.....	.....	.....	40 00	.....	Only 12 supporters; building.
	8 mills....	214 days.....	.....	40 00	.....	Only 17 supporters.
	2½ do	208 do	.....	25 00		
	3 do	200 do	.....	25 00		
	4½ do	.....	.....	30 00		
	6 do	.....	.....	40 00		
	.....	.....	.....	.....		
					1300 00	
Victoria...	12 mills	9 months	.....	35 00		
	29 do	Year	.....	35 00		
	12½ do	do	.....	35 00		
	17 do ...	do	.....	35 00		
	23 do	7 months	.....	35 00		
	18 do	Year	.....	35 00		
	31 do	9 months	.....	35 00		
	13 do	Year	.....	35 00		
	14 do	9 months	.....			
	10 do	Year	.....	35 00		
	.....	.....	.....	35 00		
	16 do	9 months ..	.....	70 00		
	9 4-10 mills	200 days.....	.....	28 00		
	3 4-10 do	206 do	.....	28 00		
	16 7-10 do	193 do	.....	28 00		
	7 2-10 do	201 do	.....	28 00		
	6 7-10 do	210 do	.....	21 00		
	3 8-10 do	212 do	.....	21 00		
					574 00	
Wellington	4 4-10 mills	215 days.....	.....	45 00		
	5 67-100 do	214 do	.....	17 50		
	9 29-100 do	204 do	.....	100 00	.....	New school-house.
					162 50	
		Total 1886..	.....	.....	$20457 25	

Schools specially aided from Public School Grant, 1885.

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Extra grant from Public School Fund, 1885.	Total.	Remarks.
				$ c.	$ c.	$ c.	
Bruce.	13 Amabel	Not reported for 1885 to Inspector.	200 days	20 00	16 00		
	1 Eastnor		190 do	10 00	8 00		
	2 do		209 do	10 00	8 00		
	3 do		210 do	10 00	8 00		Poor school grant insufficient and a balance remaining from Public School grant, these schools were aided from this fund.
	4 do			15 00	12 00		
	5 do		203 days	5 00	4 00		
	6 do			20 00	16 00		
	1 Lindsay		192 days	10 00	8 00		
	2 do		182 do	10 00	8 00		
	1 St. Edmunds		143 do	10 00	8 00		
						96 00	
Grenville.	24 Augusta	9 5-10 mills.	all year	15 00	12 00		
	20 Edwardsburg.	6 do	9 months	20 00	16 00		do do
	21 Oxford	7 do	all year	30 00	24 00		
						52 00	
Hastings.	1 Bangor	41 mills		35 04	31 00		
	2 do	40 do		34 18			
	5 do	37 do		31 62	27 00		
	1 Carlow & Mayo	10 do		8 55	8 00		
	2 do	7 do		5 98			
	3 do	32 do		27 35	26 00		
	4 do	18 do		15 38	14 00		
	5 do	30 do		25 64	24 00		
	7 Cashel	24 do		20 51	19 00		
	1 Dungannon, etc	35 do		29 91	26 00		
	2 do	18 do		15 38	15 00		
	3 do	10 do		8 55	8 00		
	4 do	25 do		21 37	19 00		
	5 do	23 do		19 66	19 00		
	6 do	20 do		25 64	22 00		
	5 Elzevir	31 do		25 00	20 00		
	1 Faraday, etc	5 do		10 26	8 00		
	3 Limerick	8 6-10 mills.		6 87			
	4 do	21 1-10 do		17 95	17 00		do do
	1 Monteagle, etc.	15 mills		12 82	12 00		
	3 do	19 do		16 24	16 00		
	4 do	15 do		12 82			
	5 do	17 do		14 53	12 00		
	6 do	18 do		15 38	14 00		
	1 Tudor	37 do		31 62	28 00		
	2 do	24 do		20 51	18 00		
	5 do	14 2-10 mills.		11 97	10 00		
	9 do	12 do		10 26	8 00		
	2 Wicklow	22½ do		18 80	17 00		
	4 do	30 do		25 64	24 00		
	1 Wollaston	12 5-10 do		11 00			
	6 do	3 4-10 do		15 03	15 00		
	8 do	12 5-10 do		4 13			
	10 do	26 2-10 do		15 14	15 00		
						492 00	
			Carried forward ...			640 00	

Schools specially aided from Public School Grant, 1885—(*Concluded*).

County or District.	Section and Township.	Rate on the dollar, 1885.	Length of time School was open, 1885.	Aid, if any, from Co. or Tp. Municipality, 1885.	Extra grant from Public School Fund, 1885.	Total.	Remarks
				$ c.	$ c.	$ c.	
		Brought forward ...		.....	.....	640 00	
Durham..	1 Cavan.....	4 7-10 mills.	Whole year.	.....	17 00	.....	Poor School grant insufficient—these schools paid from balance of Public School grant.
	19 Clarke.	8¼ do	do	25 00	17 00		
	17 Hope.....	3 do	½ year.....	.....	17 00		
	18 do	4 2-10 do	10 months..	.....	.....		
	20 Manvers.....	7 8-10 do	Whole year.	.....	17 00		
						68 00	
Leeds....	6 and 8 Burgess N., and Crosby	.....	.....	.....	100 00	.....	Repairing School House. Section very weak.
						100 00	
Hastings, South..	4 Hungerford..	1 20-100 mills	190 days....	30 00	21 00		
	20 do ..	6 8-100 do	200 do	30 00	21 00		
	21 do ..	12 do	160 do	30 00	21 00		
	22 do ..	3⅝ do	140 do	30 00	21 00		
	30 Tyendinaga..	12 2-10 do	200 do	30 00	21 00		
						105 00	
		Total...	.....	.....	.....	913 00	

RETURN

To a Resolution of the Legislative Assembly, passed on the 21st day of March, 18 84 That in the opinion of the House it would be in the public interest that a Return be laid before the House, within ten days after its meeting, shewing the indebtedness of any Municipality to the Government, whenever the same may be in arrear for over one year, either on account of principal or interest.

By Command,

A. S. HARDY,
Secretary.

Provincial Secretary's Office,
Toronto, April 7, 1887.

RETURN.

A Return shewing the indebtedness of Municipalities to the Government, on the 1st January, 1887, in accordance with a Resolution of the House, passed March, 1884.

TOWNSHIPS.	AMOUNTS DUE DRAINAGE ASSESSMENT.			—
				$ c.
Russell	13 payments of	$965 05		12,545 65
Aldboro'	10 "	588 77		5,887 70
Sombra	2 "	3,230 00	$6,460 00	
	Less paid on account		3,138 00	3,322 00
Moore	5 payments of	$152 00		760 00
"	6 "	97 22		583 32
Plympton	5 "	30 40		152 00
Enniskillen	5 "	45 60		228 00
				$23,478 67

STATEMENT

of Cash Transactions on account of Upper Canada College, for the year ending 30th June, 1886.

Presented to the Legislative Assembly.

By Command,

A. S. HARDY,

Secretary.

Provincial Secretary's Office,
Toronto, April 7th, 1887.

No. 1.

UPPER CANADA COLLEGE.

THE BURSAR'S STATEMENT of Receipts and Disbursements on *Capital Account* for year ending 30th June, 1886.

RECEIPTS.			DISBURSEMENTS.	
		$ c.		$ c.
Debentures redeemed		21481 75	Balance 30th June, 1885	7842 57
Sandwich, E.	535 00		Invested in loans	26719 67
Huron and Bruce	20500 00			
Tilbury	258 75			
Nottawasaga	188 00			
Purchase money		220 25		
Loans repaid		1377 31		
		23079 31		
Balance 30th June, 1886		11482 93		
		$34562 24		$34562 24

BURSAR'S OFFICE,
Toronto, 2nd July, 1886.

J. E. BERKELEY SMITH,
Bursar.

No. 2.

UPPER CANADA COLLEGE.

THE BURSAR'S STATEMENT of Receipts and Disbursements on *Income Account* for year ending 30th June, 1886.

RECEIPTS.		DISBURSEMENTS.	
	$ c.		$ c.
Interest on Purchase Money	127 53	Balance 30th June, 1885	1195 07
" Loans	6338 64	Commission on Loans	173 35
" Debentures	6773 66	Amount appropriated for expenditure for year	13300 00
" Bank Balances	402 01		
Rents	497 86		
	14139 70		
Balance 30th June 1886	528 72		
	$14668 42		$14668 42

BURSAR'S OFFICE,
Toronto, 2nd July, 1886.

J. E. BERKELEY SMITH,
Bursar.

No. 3.

UPPER CANADA COLLEGE.

THE BURSAR'S STATEMENT of Receipts and Disbursements on *Income Appropriation Account* for year ending 30th June, 1886.

RECEIPTS.	$ c.	DISBURSEMENTS.	$ c.	$ c.
Balance, 30th June, 1885	4548 25	Pensions—F. W. Barron, M.A	666 66	
		" Dr. Barrett	800 00	1466 66
Tuition fees	11038 15	Bursar's Office, Share of Expenses		962 13
		Insurances		17 01
Amount appropriated for expenditure from Income Fund	13300 00	Salaries—		
		J. M. Buchan, M.A., Principal..2 mos..	516 66	
Valuation Fees	1 00	Geo. Dickson, M.A., "	2166 66	
		W. Wedd, M.A., 1st class master	1300 00	
		J. Brown, M.A., 1st Math. "	1650 00	
		J. Martland, M.A., 2nd class "	1300 00	
		W. S. Jackson, Asst. Eng. "	1099 98	
		Geo. B. Sparling, M.A., 2nd Math. master	1200 00	
		W. H. Fraser, French and Ger. "	1350 00	
		A. Y. Scott, B.A., Asst. English "	937 50	
		H. Brock " "	750 00	
		G. Gordon, B.A., " "	633 33	
		A. Stevenson, Writing "	750 00	
		J. Blackstock, B.A., Asst. Mod. Lan. "	510 34	
		W. J. Logie, J. McD. Duncan, A. Holcroft, Tem. Assistants	49 50	
		Sergt. T. Parr, Gymnastic Instructor	200 00	
		George Frost, Janitor	420 00	14833 97
		Gratuity—Mrs. J. W. Buchan, widow of late Principal		1550 00
		Law Costs		53 50
		Outfit, etc		165 65
		Prizes		250 66
		Exhibitions		193 50
		Stationery and Printing		279 14
		Grounds		516 78
		Repairs		2057 08
		Examiners		87 00
		Advertising		88 40
		Fuel		599 69
		Incidentals		321 02
				23442 19
		Balance, 30th June, 1886		5445 21
	28887 40			28887 40

BURSAR'S OFFICE,
Toronto, 2nd July, 1886.

J. E. BERKELEY SMITH,
Bursar.

No. 4.

UPPER CANADA COLLEGE.

THE BURSAR'S STATEMENT of Receipts and Disbursements on "*Boarding House Account*" for year ending 30th June, 1886.

RECEIPTS.		DISBURSEMENTS.		
	$ c.			$ c.
Balance, 30th June, 1885..	2301 58	Salaries, etc.—		
Board dues.....	25178 25	J. Martland, Superintendent.....	1000 00	
		W. S. Jackson "	426 00	
		H. Brock "	240 00	
		Geo. B. Sparling	490 00	
		A. Y. Scott	300 00	
		G. Gordon	250 00	
		Dr. Barrett	149 00	
		Mrs. Sewell.....	305 00	
		Sergt. Parr	200 00	
				3360 00
		Repairs.....		1318 99
		Outfit, etc		1114 56
		Pew Rents.....		553 00
		Steward's Department.....		17868 74
				24215 29
		Balance, 30th June, 1886.....		3264 54
	27479 83			27479 83

ANNUAL REPORT

OF THE

PROFESSOR OF DAIRYING

AT THE

ONTARIO AGRICULTURAL COLLEGE.

1886.

SPECIAL EDITION.

Printed by Order of the Legislative Assembly.

Toronto:
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1887.

REPORT OF

THE PROFESSOR OF DAIRYING.

GUELPH, 1st February, 1887.

To the Honourable A. M. ROSS,
Commissioner of Agriculture:

DEAR SIR,—I have the honour to submit a brief report of work done in connection with the Dairy Department during 1886.

My duties commenced on 1st April. The time consumed attending conventions and general farmers' meetings in the interests of the dairy industry of the Province left less time for purely college work and experimental investigation than these matters would otherwise have received.

My trip to England, in charge of Ontario's contribution of butter and cheese to the Colonial and Indian Exhibition—which mission you were good enough to entrust to me—occupied, with its associated duties, quite three and a-half months of the remainder of the year.

The work done outside, in our own Province, as well as that attended to while abroad, was doubtless valuable to the dairy interests of the country, though the results will not be found tabulated in this statement. For the sake of clearness, as well as for service of those seeking information from this report, it is framed into seven parts.

I. Creamery Management.
II. Dairy Investigations.
III. College Lectures.
IV. Outside Instruction and Experiment.
V. Cheese and Butter from Ontario at the Colonial and Indian Exhibition.
VI. The Farming and Dairy System of Denmark.
VII. General Remarks and Conclusions.

I. CREAMERY MANAGEMENT.

Three objects were sought to be attained in all that was done in connection with, at and for the Ontario Creamery and its patrons. I judge the same three-fold purpose to have been the essence of the Government's intention in the erection, equipment and operation of a creamery near the Agricultural College.

(*a*) The Government Creamery should have educational value and be of service in that sense to the whole farming community of the Province. The farmers in districts where none have yet been built, and where cheese factories are not established, may learn from its reports what to expect in the way of returns from the creamery business, if introduced into their neighbourhood. Its working has been illustrative of the comparative suitability of the two systems of operation—cream gathering and milk collecting—to different localities.

A study of the matter to follow will yield some reliable information on the details of methods best suited for the profitable handling of milk, cream and butter in the stages of the process of preparation for the market.

Enterprising farmers in backward sections may be encouraged by the measure of its success, in a neighbourhood where dairying had been neglected for the supposedly more remunerative branches of stock-raising and cattle feeding. The success on its own merits of a creamery near Guelph is evidence that no district in Ontario which has not already a cheese factory can afford to be without the one or the other.

(*b*) The creamery has been made a school for practical dairy instruction to students. Butter-makers from other creameries may visit it; and all its acquired information is available for the trade.

(*c*) The Government Creamery affords its patrons no special benefit beyond what may be realized from any joint stock or private concern in any part of Ontario. Those who furnish cream are paid for it at the price realized from sales of the butter manufactured, after all expenses for cream-gathering, management and labour and furnishings, tubs, fuel, ice, etc., etc., have been deducted. These expenses are kept as low as possible and close economy is practised in all outlays. Notwithstanding that, the rate of expenses per lb. of butter is very high. The cost of cream-gathering depends so much upon the distance to be travelled for the quantity collected, that the number of patrons and cows within a given area largely determine the rate per lb. For the ground covered, the number of patrons and the quantity of cream supplied were unexpectedly and unnecessarily small. This rate of expense is correspondingly high. Such a difficulty will hardly be experienced another year.

The small number of cows kept by each patron, together with unfavourably dry weather, lessened the supply rapidly after July, while the cost for gathering remained at a fixed sum per day.

At a public meeting of the patrons, held before the creamery opened for the season, an advisory committee of five gentlemen from their number was appointed. This committee has been helpful in the satisfactory conducting of the business. Its members have been consulted as to times for selling and prices at which to sell the butter. The committee has by its judicious advice made the task of running the creamery on a sound business basis much easier of accomplishment. People look for much more from any Government institution than from a private business concern.

The agreement with the patrons was to the effect that they were each to receive after the end of each month a cash advance on cream supplied at the following rates:—

For	May—14c.	per lb.	of butter yielded.
"	June—14c.	"	"
"	July—14c.	"	"
"	August—14c.	"	"
"	September and October	15c. "	"

After paying these prices and providing out of the receipts from sales of butter for all expenses, including $325 to the Government for the management and the partial

use of one horse, there is a balance on hand of $601.18, which is still due, and will be distributed to the patrons.

SUMMARY.

Receipts.		*Expenditure.*	
Total value of butter	$10,322.71	Total cash to patrons for cream.	$7,274.97
Total sales of buttermilk and profit from feeding buttermilk	322.63	Cream-gatherers	1,235.16
		Management and labour	750.46
		Furnishings, Marine Insurance and Incidentals	783.57
		Balance due patrons	601,18
	$10,645.34		$10,645,34

Butter manufactured	50,281	lbs.
Number of guages of cream received, (4 guages to each inch) diameter of the can used 8½ inches	413,210	
Number of guages of cream per lb. of butter	8.21	
Average price per lb. of butter	20.53	cents.
Number of patrons	152	
Number of days in operation	118	
Seven routes were taken up. Average distance for each round trip, about	22	miles.
Cost of gathering cream	2.45	cents per lb. of Butter.
Cost of management and labour	1.49	"
Cost of furnishings, etc	1.56	"
Total cost for expenses	5.50	"
Receipts from buttermilk account	.64	"
Net cost for manufacturing	4.86	"

I offer a few explanatory remarks on these facts.

The plan followed was that of collecting the cream only. The plain shot-gun can, with side glass and measuring gauge divided into quarter-inch markings, was used. The cream was gathered only every second day. The quantity of cream wao reckoned by the gauges shown before the skimming was commenced.

Every other day's skimming was performed by the patrons, to permit them the use of the skim-milk every day for feeding calves. The average quality of the season's cream was below the standard for butter production. That was mainly due to the too early skimming of the cream.

A commencement was made to test the comparative value of each patron's cream. Samples were regularly and systematically collected by the cream gatherers. These samples were examined by the usual oscillating test-churn ; but as all the samples were in various conditions of ripeness, with widely different degrees of acidity, the results were not accurate nor exactly reliable. So impractical in our case were the results considered, as a basis for adoption as the paying standard, that they were abandoned after the end of July. There is a very great difference between the fat qualities of some samples of cream. Cream itself bears no unvarying ratio to the quantity of milk from which it is taken. It may be defined as merely a portion of the milk into which the fat globules have been gathered in a comparatively large per cent. Sometimes seven-eighths of the whole butter-fat contained in the milk may be collected into a cream not measuring by bulk more than one-twelfth of the whole volume of the milk, while one-third of the bulk of the same milk might be separated as cream, and then contain exactly seven-eighths of the whole butter-fat of the milk. We are behind in not having in use an efficient, easily-practicable,

accurate and reliable method of testing cream. Some attention has been paid to the lactoscope. It is valuable in examining sweet creams, but is altogether unsuited to the testing of cream even slightly sour. It is thus ruled out of everyday use in creameries collecting cream every second day. The ether-test has been found expensive and wanting when measured by the needs of the ordinary, or extraordinary, butter-maker. The centrifugal test is unworkable with sour cream.

The oil test churn is apparently the best apparatus so far invented for the purpose. Every creamery should have some method of making such tests ; and payments for cream should invariably be made according to *quality* and quantity. The Ontario Creamery can seek no credit for taking the lead in this matter. For the coming summer I hope to see an oil-test churn in steady and satisfactory use.

The butter market has shared in the depression of prices for all farm products. The price realized—rather more than 20½ cents per lb—may be considered rather under than over what might reasonably be expected as the average for the next five or ten years. The butter was sold at four times during the season, as soon as sufficient for economical export shipment was made.

By reason of the unfavourable conditions already mentioned—dry weather, etc.—the advisory committee recommended that the creamery be closed after the end of September ; hence the short season (118 days) of operation.

The causes for the to-be-regretted high rates per lb for cream gathering, etc., have already been discussed.

The receipts from butter-milk account were largely from sales for delivery in Guelph city, for house and bakers' use.

The butter was salted during May, June and part of July at the rate of 1 oz. of salt per lb. of butter. During the remainder of the season, ¾ oz. per lb. was used.

A series of tests with different brands of salt, English and Canadian, was undertaken. These will be described under the head of Dairy Investigations.

The butter was packed for the most part in tin-lined tubs. This was done in compliance with the request of the customer in Scotland who purchased the bulk of our make. Satisfactory reports were received from the buyer.

Our butter-maker, Mr. McHardy, is to be commended for his skill and care in the making of the butter, as well as for the interest taken in giving the students practical instruction in the creamery.

The cold storage-room is not large enough, and advantage was taken of the College cellars for storing part of the butter.

The lower the temperature of the room in which butter is kept—if that be above freezing point—the better will the butter keep while there, and the better will it keep when brought into the the warmer temperature of the English warehouses. The same conclusion is applicable to its treatment for shipment and during transmit. Therefore, every creamery should have, as part of its buildings, sufficient and suitable cold-storage for its make of butter. College or other convenient cellars are not adjacent to, nor available by, most creameries.

Before comparing the returns to the average farmer from the cream supplied to a creamery with those realized from home butter-making, let me point out a leak entailing serious loss upon those supplying cream who do not make adequate provision for the proper care of their milk for cream separation.

During the month of August I visited the farms of a large number of the patrons, and by measurement and calculation learned that on the average 33 lbs. of milk were taken to yield enough cream to make 1 lb. of butter. During the same period by the ordinary 12 and 24-hour setting in ice water, 28 lbs. of milk yielded sufficient cream to make 1 lb. of butter. Had the same milk been used with the centrifugal separator, 26 lbs. of milk would have give as much cream as would have given 1 lb. of butter.

From these figures it follows that by the ordinary and very insufficient care given to the setting and cold-keeping of their milk by patrons, the butter yield was 3.03 lbs. butter per 100 lbs. milk.

By ordinary setting in ice water the yield was 3.57 lbs. butter per 100 lbs. milk.

By use of centrifugal separator, 3.85 lbs. butter per 100 lbs. milk.

From these facts it will be seen that the increased yield of butter from a given quantity of milk, set in ice water, is 17.8 per cent. on the quantity realized by ordinary practice. The increase by the use of the centrifugal separator over ordinary practice would be 27 per cent. The increase by use of centrifugal separator over setting in ice water would be 7.8 per cent. Hence, where cream only is supplied to a creamery, every patron should provide for use a liberal supply of ice.

The larger returns in butter from the centrifugal separators point to an advantage from their use where the increased cost of drawing the whole milk and returning to the farms the skim-milk would not more than equal the value of the increase of butter realized.

As this is a live question for those interested in the starting of new creameries, I state four points for consideration in connection with the facts of circumstance in every locality.

(1) Proportion of cream separation that may be effected.

(2) Effect of the process on the quality and condition of the cream.

(3) Effect of the process on the quality of the skim-milk.

(4) Costs.

In connection with (1) the above stated ratio of separation may be taken as reliable.

(2) Where cream has to be carried a number of miles during hot weather its condition and quality are not as good for butter-making as where the separation is effected at the creamery.

(3) For profitable calf-feeding the skim-milk must be sweet. Both processes, when well managed, leave it at the farm in that condition.

(4) Under the head of "Costs" are to be compared: cost of machines and pails; cost of maintenance; expense of operation against increased cost for collecting milk over cream; saving in expense and labour in setting and caring for the milk at the farm.

The foregoing information should enable those interested to intelligently decide for themselves which plan to adopt. This general guiding conclusion may be added where a small quantity of milk is available, and then only by collecting from long distances: the setting plan would be more economical, but where a large supply of milk may be obtained within a small area the centrifugal plan will be most profitable.

In pointing out the advantage to the farmers of the creamery system of butter-making over the plan of home butter-making, I have little to say about the character and reputation of the average Canadian dairy butter. As many farmers' wives aver—and of course the farmers peacefully agree—it may be just as good or better than creamery butter when it leaves the churn, but the awkward and unfortunate fact still remains that whereas the average price of creamery butter in Ontario during '86 would be about 20 cents per lb., the average price for dairy butter made during the same months was only 13 cents per lb.

In each neighbourhood of, say, ten miles square, over 300 farmers might as well be supporting a creamery at some central point, or two creameries at convenient centres, with the milk of 1,800 cows. If each cow yielded, during the summer enough milk to make only 100 lbs. of butter (and with proper feeding and care during winter, spring summer and fall, they would give at least 150 lbs.), the product from these 1,800 cows would bring just *$12,600 more money* into the neighbourhood through the creamery than by the ordinary home methods of making and marketing. Every farmer would get his own share of the increased returns, and his family would be spared the taxing work of butter-making during the hot summer months. Then the extra attention paid to dairying would result in the cows being better and more economically fed; more milk would be produced at less cost; the coarse grains would be mostly consumed on the farm; increased fertility of the fields would follow; better condition of the skim-milk would make possible the rearing of more stock with more profit. How that may

best be done will be discussed under heads II. and VI. of this report. The destiny of profitable farming in Ontario will be found along the line of careful, economical and progressive dairying, and the sooner Canadians recognize the fact and shape their plans and course accordingly, the sooner will there be no occasion for complaint of "hard times."

II. DAIRY INVESTIGATIONS.

That the results of enquiry, observation, investigation, experiment and study may have the largest practical value, these should be carried on and out according to a systematic plan. The student in every line of science and practice will occasionally stumble into acquaintance with an unexpected fact, the knowledge of which will be serviceable. But in a field where so many painstaking scientists have ploughed and searched so long and thoroughly as that of dairy science, it was not to be expected that one season's working would turn up much absolutely new. The plan laid down for guidance here during 1886 was made for the purpose of making accessible and acceptable to the general farmer such information as would enable him to put into immediate and profitable practice better methods of managing the cows he already owns, the fields he tills for their feed, the milk he handles, the calves he tries to rear and the hogs he feeds on the products of his dairy. One summer's trial would be but a very inadequate experience from which alone to draw conclusions for the guidance of Ontario farmers. Hence I have not hesitated to supplement the information gained this season by that formerly acquired by years of practice in dairy work, as well as by that available from the investigations of other reliable dairymen before framing any conclusions for publication. Four divisions will be made for the sake of plainness.

I. The management and feeding of milking cows.

II. The handling of milk.

III. The rearing of calves.

IV. The disposal of the by-products by hog feeding.

The Management and Feeding of Milking Cows.

Twelve ordinary cows such as might be obtained from almost any six farms in the Province were purchased. They were bought in the open fair. In passing I cannot suppress the thought that the fair is still too often used as a dumping place on which to weed out the poor milkers, merely to have them transplanted to some other farm. Let every dairyman weed out his poor, unprofitable milkers by fattening for the butcher and not by selling into another herd. The perpetuation of every kind of farm weed is a practice from which, all round, we are happily becoming free. In selecting a cow for milking purposes, a careful observation of certain "points" will guide the buyer in making a good choice. Where a reliable record of the animal's past performance may be examined, it is of unquestionable use in estimating her milk-producing value. Descent from stock with creditable records is of much worth. But so much depends upon the individuality of the animal that the values just mentioned can best be rated in conjunction with their apparent evidences in her body.

When buying cows on a fair ground the animals have to be taken for what they are worth by appearance. There are some general characteristics peculiar to all animals of individual merit in all the milking breeds ; a course, rough, bullish appearance is *not* one of these. Size is a matter of secondary consequence. Temperament is a matter of prime importance. Cattle, as well as horses, may be classified in temperament as nervous or lymphatic.

The "nervous" in the cow is indicative of good milking power; in the horse it is associated with speed and action. The "lymphatic" in the cow means a tendency to lay on beef; in the horse it stays with draught and heavy weight.

Milk and butter are essentially the products of nervous force. Hence a good milker should have abundant nerve power. That does not necessarily imply nervousness. Her organs are to be considered merely as so much nervous machinery for the accomplishment of a given end. The purpose of her life is to make the largest possible quantity of the best milk out of the least possible consumption of food. That faculty will generally reveal itself in what are called the "points" of the animal. Specifically these might be described in the following order, which begins with the head and follows around the outline of the animal's body as viewed from the side. The ideal cow should have a broad forehead, a wide poll. The *seat* of nervous power is in the brain, and the room for that organ should be ample. Her eyes should be prominent, bright, and mild looking. All the better is the indication if they stand out so well as to give the face a dished shape—the hollow up and down the face. Such eyes promise nerve power if their owner be well used. A broad muzzle is a good point. Fairly large and open nostrils should be looked for; but a cow with constantly gaping nostrils is a little too expensive to keep. The face should be rather long, lean, and clean cut. An instructive model for comparison is the face of the blood horse. Waxy smooth horns and fine ears usually accompany the delicately yet strongly-strung nervous organization we seek. The head will be small in proportion to the weight of the body, and tapering in fine lines. The neck should reveal a strong jointure between the backbone (containing the spinal cord) and the skull. There is a large nervous connection from the spine to the uterus and the udder. A fine tapering neck, with no superfluous flesh, is a desirable point. The top of the shoulder had better be sharp than broad. In a young cow a hollow back is often indicative of weakness. A slightly arched or straight back is preferable. The loin should be wide, flat and thin. The pelvis—the boney frame-work whereby the hind legs are attached to the backbone for locomotion—should be broad, large and somewhat arched. A hollow pelvis is the omen of danger from milk-fever or an early breakdown. The ham will be in-sloping and in-hollowing, leaving lots of udder-room. The shape is merely indicative of the tendency of the animal. The pitch or symmetry of the udder's shape may be ignored except in the case of a "fancy" animal. The surface extent of the udder's attachment to the body is all important. It is generally a measure of the arterial and nervous activity in the milk-secreting glands. Taking a side view of a cow in full milk, the line of connection or the line of absorption will be the direct measure between the upper and lower points of attachment between the udder and the body. The longer that line is, the better is that "point." A fleshy udder is not wanted. The milk veins are mostly in size and prominence proportionate to the flow of venous blood from the udder, consequently the larger the better. Good barrel room is required to hold and permit of the proper digestion of abundance of suitable feed. In such a cow the energy of digestion is allied to the energy of milk secretion. The chest should be deep, leaving full play for the heart and lungs—these vital organs for blood-circulation and purification. Good blood promotes the activity and energy of the nervous system, and thus stimulates the secretion of milk. Many other "points" might be mentioned, some of them important, such as a soft, mellow skin, fine silky hair, etc., but enough has been written to help the ordinary farmer in the selection of a good milker. The form of a good milking cow might be briefly described as tending to the wedge-shape from three points of view: as looked at from the front, rather sharp on the top of the shoulder and widening to the chest; as looked at from behind, along the back, broad and wide across the pelvis and narrowing towards the shoulder; as seen from the side, deep from the back to the lower line of the udder and lighter in the forequarters.

When the twelve ordinary cows were bought, as many of these points as possible were sought for in each one. They were, with one exception, in poor condition as to flesh. The eleven had calved within a fortnight prior to the 24th of May. From the 25th May till July 7th they each received 4 lbs. of wheat bran per day, besides the fair grass of a common pasture field, part of which was still bush. During that period, the average milk yield per day was 34½ lbs. per head. They were milked regularly between the hours of five and six o'clock in the morning and evening, in a stable. They had free

access to pure water and salt. From July 8th to July 20th, each cow received 2 lbs. of bran in the morning and a feed of fresh cut oats and vetches in the evening. By this time the grass had become comparatively bare and dry. The average yield per day during those thirteen days was 28 lbs. per head. These returns were not surprisingly large, but taking into account the poor body condition of the cows they show what may be expected from ordinary Canadian cows when kindly cared for, regularly milked and supplied with the most economic feed. The supplying of bran as a supplementary feed, when the early grass is rank and watery, and when the pastures fail from drought, is a profitable plan for increasing the milk yield. It most satisfactorily takes the place of supplementary green feed, and saves the troublesome and expensive work of handling so much weight. The cost envolved in the labour of partial soiling in early summer and autumn is the only objection to undertaking it and recommending its general adoption throughout Ontario.

On July 21st the cows were divided into three groups. No further bran was allowed. Group 1 had no feed besides the grass on the pasture field. Groups 2 and 3 received a feed of green oats and vetches just before milking, morning and evening. The first result apparent was an immediate loss in the weight of milk from group 1, equal to 16 per cent., and from groups 2 and 3 of 7 per cent. The feeding was continued in the same way till July 30. The average loss in weight of milk from the average of the previous eight days was—

Group 1 (no extra green feed).....16.6 per cent, loss.
Groups 2 and 3 (extra green feed) .....12.2 " "

From July 31 to August 7, groups 1 and 3 received a supply of the same formerly mentioned kind of green feed, while the cows of group 2 had only pasture with the others.

Group 1 showed an immediate gain of 9.7 per cent. by weight.
" 2 no appreciable change "
" 3 " " "

On the period of eight days—

Group 1 showed average gain of 9.3 per cent. by weight.
" 2 no appreciable change "
" 3 " " "

From August 8 to August 15, groups 2 and 3 received a supply of the same kind of supplementary green feed, while the cows of group 1 had only pasture with the others.

Group 1 showed an immediate loss of 14.3 per cent. by weight,
" 2 " " gain of 14 " "
" 3 " no apparent change.

On the period of eight days—

Group 1 showed an average loss of 3 per cent. by weight.
" 2 " " gain of 4.4 " "
" 3 " no appreciable difference "

After August 16 all the cows were fed green corn stalks twice per day.

The conclusion has been drawn from other data, and with it the foregoing figures agree that a frequent change of feed during summer, even a change of pasture fields, will largely increase the flow of milk.

The extra yield of milk from feeding supplementary green feed will largely pay for the extra cost at the time, but the keeping of the herd up to a full flow while the pastures are bare will enable them to give a much larger yield when feed is abundant on the stubble fields and aftermath.

The changes of feed had some uniform influence on the quality of the milk for butter-making. There was no perceptible difference in the milk to the taste or smell. The milk from each group was accurately weighed, set in deep setting pails, in ice water, at an average temperature of 86° Fahr. It was cooled to an average temperature of 40° Fahr. The skimming was performed after the lapse of about twenty-two hours. The cream was ripened and soured in the usual way, and after each churning the weight of salted butter (1 oz. salt per lb. of butter) was recorded. Over thirty analyses were made, and the following table shows the differences attributable to the use or absence of supplementary green feed :

	Lbs. of milk per lb. of Butter.	Lbs. of milk per inch of cream in a can 8½ in. diam.	Lbs. of butter per 100 lbs. milk.	Per cent. of fat in Skim milk.	Per cent. of fat in Buttermilk.	Per cent. of other solids in Skim milk.	Per cent. of other solids in Buttermilk.
Average results from milk when no supplementary green feed was supplied	26.34	12.79	3.82	.514	.996	8.91	7.14
Average results from milk from same cows, during same total period, when green feed was supplied as before described..	25.47	12.61	3.95	.506	.748	8.84	7.75

It will be seen that while there is hardly any chemical difference in the composition of the whole milk (butter, fat and solids in skim-milk and buttermilk) from the two treatments of cows, there is an appreciable commercial difference in the readiness with which, under similar treatments of milk, the green feed milk yields its fat to the butter-maker. The supposition that when cows were given an extra supply of succulent feed, and gave a larger quantity of milk, that it was therefore poorer in quality as to per cent. of solids, has no foundation in fact. The larger the quantity of milk a cow can be made to give on suitable feed, the more the milk is worth per 100 lbs. When just made, the butter from both qualities of milk seemed equally good. It is being kept to note the effect of age on its keeping properties.

For many years it has been recognised by observant and thoughtful dairymen that when milking cows were denied access to salt, the quantity and quality of the milk yield was at once affected. A little investigation, more to define into accuracy the facts known than to bring to light any new ideas, was undertaken with eleven of the cows already mentioned. Until August 15 these cows had access to salt at will in their pasture fields. Then all salt was removed from places within their reach. Small boxes were procured for attachment to the mangers of the stable in which the cows were tied twice a day for milking. The cows were divided into four groups. Groups 1 and 2 (five cows) received no salt. In the boxes before the six cows of groups 3 and 4 a supply of common barrel salt was placed. No change was made for twelve days. Then salt was placed before the three animals of group 1, and still continued to the three animals of group 4. No salt was allowed to groups 2 and 3. This treatment was continued for a like period. The cows of group 4 could take as much salt as they liked twice a day during both periods. In every other respect all the cows received similar treatment. The feed, as before mentioned, was pasture supplemented now by a feed of green corn fodder twice a day.

The following are the results from the observations and record : The average immediate loss (taking a period of two days after each change) was 17½ per cent. in the weight of the milk yield when salt was withheld. The average total loss in the weight of milk yield from the eight cows of groups 1, 2 and 3, which were insufficiently or irregularly salted, was 14½ per cent. for the whole period, There was no loss in the

weight of the milk yielded from cows of group 4, which had access to salt daily during the same period.

It was required that I should leave for England before the experiment was nearly completed. Still, I am safe in drawing the conclusion that the irregular and insufficient salting of cows is a cause which lessens their production of milk. Just *how* the cause brings about the result I do not yet know.

The quality of the milk as to its constituents and condition was examined. Cans of milk from the cows taking salt, and from those from which salt had been withheld, were placed under like conditions. The milk was set as usual for cream. Then after twenty-four hours it was exposed to the ordinary temperature of the room, about 65° Fahr. The milk from the cows not receiving salt was perceptibly sour to the taste and smell twenty-four hours sooner than that from cows taking salt. Moreover, an easily distinguishable difference in the flavor and "fullness" to the taste in favor of the salt-used samples was at once detected by all to whom the comparison was submitted. The conclusion drawn is, that the irregular or insufficient salting of cows leaves their milk not so easily kept sweet for supplying to cheese factories. The further examination and analysis of the milk was prevented by my absence at the Colonial and Indian Exhibition.

For butter making the observed result may be seen in the following table. The milk was set as formerly at an average of 86° Fahr., and cooled to under 42° Fahr. Both kinds were treated alike as to daily temperature and time set.

	Lbs. of milk per lb. of butter.	Lbs. of milk per inch of cream in can 8½ in. diam.	Lbs. of butter per 100 lbs. of milk.
Average results from milk when cows had access to salt regularly	29.67	14.58	3.37
Average results from milk when cows had no access to salt for periods of twelve days	30.7	14.48	3.26

The cows having a continuous supply of salt consumed on the average one-quarter pound per head per day. The exposure of rock salt to milking cows is evidently not sufficient. The cow's palate may be readily satisfied before she has licked off enough for her system's needs. The cows from which salt had been withheld for twelve days were too greedy for it when supplied. They each licked enough to make their milk taste salty. The preferable plan, and one which leaves forgetfulness less wasteful, is to have a protected trough or salt-box from which the animals may help themselves as disposed.

An abundant supply of water—and pure water only—should be where milking cows may drink freely twice or three times a day.

Milk is so much the product of nervous operation that any undue excitement, no matter how induced, lessens the milk supply and injures its quality. The kind and gentle treatment of his cows by the sensible dairyman in one source of his profit.

The average yield of the eleven cows that milked during the whole period was 3,264 pounds of milk per head of 117 days, notwithstanding the changeful usage already referred to. Were the present herds of milking cows in Ontario but properly stabled and fed and watered and salted and handled, there would be an immediate increase of not less than 25 per cent. in their milk returns, and that at no extra cost to their owners.

The Handling of Milk.

The subjoined bulletin was issued early in the season:

Agricultural College—Bulletin II.

Points for the attention of the patrons of cheese factories and creameries:

The business of dairying when intelligently and carefully followed insures to the farmer a safe and steady income. The Province of Ontario is favored with all the natural

advantage needed for the production of cheese and butter of the finest quality; and as the permanent success of the dairy industry depends upon the quality of the product, every dairy farmer is or should be interested in its improvement. To help in that direction is the purpose of this bulletin. In producing and supplying milk to cheese factories and creameries the following points require attention in order that the best results may be obtained.

General Rules.

1. Milk from healthy cows only should be used, and not until at least four days after calving.

2. Any harsh treatment that excites the cow lessens the quantity and injures the quality of her yield.

3. Cows should be allowed an abundant supply of wholesome, suitable food, and as much pure water as they will drink.

4. A supply of salt should be placed where cows have access to it *every day.*

5. Cows should not be permitted to drink stagnant, impure water, nor to eat cleanings from horse stables, leeks, turnip tops, or anything that would give the milk an offensive taint.

6. All milk vessels should be thoroughly cleansed; first being well washed, then scalded with boiling water, and afterwards sufficiently aired to keep them perfectly sweet.

7. Cows should be milked with dry hands, and *only after* the udders have been washed or well brushed.

8. Milking should be done and milk should be kept only where the surrounding air is pure and free from all objectionable and tainting odours. Milking in a foul smelling stable or yard imparts to milk an injurious taint. Sour whey should never be fed, nor should hogs be kept in a milking yard nor near a milk stand.

9. Tin pails only should be used.

10. All milk should be properly strained immediately after milking, and for that purpose a detached strainer is preferable to a strainer-pail.

For Cheese Factories.

11. In preparing milk for delivery to a cheese factory it should, immediately after straining, be *thoroughly aired* by pouring, dipping, or stirring. This treatment is as beneficial for the morning's milk as for the evening's, and is even more necessary when the weather is cool than when it is warm.

12. In warm weather all milk should be *cooled* after it has been aired, but not before.

13. Milk kept over night in small quantities—say in tin pails—will be in better condition than if kept in larger quantity in one vessel.

14. When both messes of milk are conveyed to the factory in one can, the mixing of the morning with the evening's milk should be delayed till the milk-waggon reaches the stand.

15. While the milk is warmer than the surrounding air it should be left nncovered, but when colder it may with advantage be covered.

16. Milk-pails and cans should be protected from the rain, and milk-stands should be constructed to shade the cans from the sun.

17. Only honest milk with its full cream and full share of strippings should be offered; violation of this requirement leaves the patron liable to a heavy penalty.

For Creameries.

18. In preparing milk for delivery once a day to a creamery where the whole milk is received, the treatment should be similar to that recommended for cheese factories.

19. For creameries receiving cream only, the milk should be well aired, but not cooled before setting.

20. Milk should be set for the separation of the cream where no impure air will reach it.

21. Cream rises best with a falling temperature, and the separation of cream from milk is promoted by cooling, after setting, to at least 40°.

For Butter-Making at Farm Dairies.

22. When the cream is used for butter-making at the farm the foregoing treatment and conditions may be observed with profit.

23. Good ventilation for a milk-house, milk-cellar or dairy-room, is most essential, and may be provided for by leading an air-drain underground, for say 200 feet. Through it a supply of pure, fresh, cool air may be admitted. The foul or warm air may be allowed to escape through ventilators or windows in or near the ceiling.

24. Cream should invariably be removed from the milk before the milk is sour.

25. The cream for each churning should be gathered into and kept in one vessel.

26. The whole of the cream should be well stirred every time fresh cream is added.

27. In summer cream should not be left longer than three days before churning.

28. The best churning temperatures are between 57° and 60° during the summer, and between 60° and 64° during the winter.

29. Butter can be more thoroughly washed free from butter-milk while in the granular condition than after it is gathered or pressed into a roll.

30. Only the best pure salt, of medium and uniform fineness of grain, should be used, and from three-quarters to one ounce of salt per pound of butter will be found satisfactory for the summer.

31. The utmost cleanliness in milking, in vessels, in utensils, and in all surroundings must be observed to preserve the flavour and body of milk, cream, butter and cheese from contamination.

A Dairy Class.

A desire has been expressed for the formation of a Dairy Class, to be trained in butter-making at the Ontario Creamery during the forenoons, and to receive general instructions in dairying in the lecture-room during the afternoon. September would be the most suitable month. Farmers' sons and daughters and others proposing to attend will please address the Dairy Department, O. A. C., Guelph. No fee will be charged. Let applicants write soon.

Enquiries on matters pertaining to the dairy industry of the province, addressed to the undersigned at the Dairy Department, Ontario Agricultural College, Guelph, will receive attention.

Jas. W. Robertson.

Later researches during the summer have but confirmed the correctness of each of the thirty-one points mentioned. To elaborate each paragraph would fill the pages of a large volume. Some examination was made of the temperature conditions most suitable for cream-raising. These have been partly presented and discussed under the head of Creamery Management. It was found that practically as full a separation of cream was effected by setting at any temperature between 85° and 98° Fahr. and then causing the temperature to fall 40°, as by setting at 98° and then causing the temperature to fall to the same point.

Samples of cream were churned at six difierent degrees of ripeness or sourness, and the butter-milk was analyzed to discover the comparative effectiveness of the churning operation.

The following table shows the average per cent. of fat left in the butter-milk from cream in different stages of maturity. No. 1 represents the average from creams churned sweet, and No. 6 the average from creams churned quite sour. The degree of ripeness or perceptible acidity was gradual from No. 1 (sweet) onward to No. 6 (sour) :

	Per cent. of fat left in Butter-milk.
No. 1	5.255
2	3.101
3	3.344
4	2.542
5	1.019
6	.739

These per centages of fat left in the butter-milk prove nothing absolute about the quantity of fat necessarily left in butter-milk.

The effectiveness of the process depends much upon the construction, the motion and the speed of the churn. But as the churning treatment in all these cases was similar, the varying percentages of fat left in the butter-milk were solely due to the condition of the cream.

Sour cream will yield its butter by churning in less time than sweet cream, other conditions being alike.

Besides the instructive fact, apparent on the face of the table, this may be learned : The mixing of creams of different ages and acidity together, just before churning, makes large loss of the butter-fat in the butter-milk unavoidable.

To points 25, 26 and 27 of the Bulletin, this may be added : The best method of preparing cream for churning is to have the whole cream kept cool and sweet till about twenty-four hours before the churning. Then add to it about two per cent. by bulk of cream that has been raised, exposed to pure air, and afterwards kept as warm as 70° Fahr., to promote souring. The best kind of fermentation, resulting in sourness, is thus induced, and all bitterness in flavour and loss of fat are avoided.

A series of tests, to throw light upon the comparative values of the Canadian and English brands of dairy salt in butter-making, was undertaken.

Some forty-five tubs, salted from 1 oz. per pound to ½ oz. per pound, are still on hand.

The matter of salting butter and the salt interests involved are so important that this Department looks for the assistance of a committee of experts from the Creamery Association of Ontario, in judging of the present qualities of the butter, after having been kept for five months. A bulletin will be issued, stating the conclusions reached after such judging has been completed. Meanwhile a general standard, whereby to select a salt for butter making, may be presented :

1st. The salt should be pure and clean.

2nd. It should be easily dissolved, and not hard in the crystal from roasting.

3rd. It should be of medium fineness, and nearly uniform in the quality and size of its grains. If it be pure in composition, a salt with a velvety body to the touch is well suited for use in butter.

The addition of coarse, hard salt to butter not only injures its grain in the working, but remaining undissolved it is easily recognized by the *touch* of the butter trier, or tongue as well as the *taste*. When such is the case the value is very much lessened, especially in the British market.

The Rearing of Calves.

Eight calves were reared on skim-milk and supplementary feed after they were a fortnight old. They were sold for further rearing to a neighbouring farmer. The value

realized for the skim milk was slightly under two and three-quarter cents per gallon. That need not be accepted as applicable to all calf-feeding. According to conditions of stock and market, it may be more or less. This much is assured: fine, thrifty, healthy and large calves can be reared without whole milk after they are two weeks old.

Following the style of communicating information already adopted in this Report, permit me to gather into a chapter of instruction and advice the knowledge on this subject, gleaned from experience during the past and previous years:

The "heredity" and "individuality" of the farmer have more to do with the successful raising of profitable milking cows for his dairy, or steers for his stalls, than the "pedigree" of his herd.

Breed and blood are of much service to the stock-raiser. So are a good steam boiler and engine to the grain thresher. What fuel and oil are to the latter, feed and care are to the former. A good thresher, with good fuel and skill, will get more efficient work out of a poor boiler and second-rate engine than a shiftless, careless engineer will get out of the best machinery.

As a rule there is no profit in trying to raise the late calves. In any case the calves from the best milking cows only should be selected for rearing. The herd bull should have a pedigree linking him to a family distinguished for milking qualities. If a calf with a big body at one, two, three, or six months old be what is wanted, it had better be allowed to suck its dam. But if a calf leaving a large profit on its rearing at two years old, and a large profit on its milking or fattening be the object sought for, then it should be reared the other way. Where the calf is allowed to suck the cow, for even a few days, the cow is in a less contented condition of nerve to yield her milk to the hand for some weeks. The restlessness thus caused will tend to the lessening of the milk yield in most cases. The task of teaching the calf to drink is doubly difficult after it has acquired the habit of getting its supply in the natural way. Invariably where a calf has been permitted to run with its mother for ten days, I have found it to go back, or at least fail to gain in condition for a fortnight or more, when a change was made to hand feeding. The checking of its growth and thrift at that early stage in its development entails more loss of possible profit in after years than a partial winter's starvation when eighteen months old. The organs of digestion, whose function it is to get for the animal all possible good out of its food for maintenance, growth, beef, milk or work, can never be injured with impunity. The treatment from the day of birth should be to preserve and, if possible, improve the assimilating power. Milk from the first six milkings of the mother should be fed to her calf three times a day. The first milk, "colostrum" or "beastings," is of medicinal as well as food value to the young calf. For two weeks the calf will not need nor take much besides the two or three quarts of whole milk of each feed. The milk should be fed as near the blood temperature, 98° Fahr., as practicable. After the lapse of a fortnight a gradual change, during the third week, may be made from whole milk to sweet skim milk. Such a change can be best effected by putting skim milk in gradually increasing quantity with the whole milk till it is wholly substituted for it. The skim milk should always be fed *sweet*. The sourness of milk is evidence that some of the feeding value of its large per cent. of sugar of milk has been lost by the change into acid. Besides, the sourness renders the food unsuited to the stomach of a yet tender calf. Sour feed in such a case favours growth in but two ways. The calf so fed will develop marvellous girth extension. "Pot-bellied" is hardly sufficiently expressive of the chronic enlargement from that cause. Then the growth of hair is effectually and speedily promoted. It becomes so strong in "stalk" that it stands out in daily protestation against that kind of feed. The skim milk should also be fed warm. The blood heat is the best. Where no better convenience exists for the heating of the milk, hot water may be added with advantage. A feed of ice-cold milk, such as comes from the deep setting cans—by the use of which fine dairy butter can be most economically made—will leave the calf uncomfortable. That is but the evidence that indigestion exists. It may easily be made partially permanent by a continuation of such injurious treatment. The power and practice of digesting and appropriating all that is possible out of its feed should be encouraged into a fixed habit, by giving the young animal only suitable feed in the best condition of

preparation. These points about the feeding of skim milk will apply to young pigs as well as calves. A gutty, thriftless hog is the necessary product of a careless and wasteful mode of feeding even excellent skim milk.

To make up for the fat taken out of the milk in the shape of cream, some supplementary feed should be given with the skim milk: Linseed, oil cake, bran, oats and pease are all good. Bran is frequently mixed with chopped oats and pease, and fed raw in the milk. That practice is most objectionable, and frequently results in the loss of the full value of the grain fed, besides inflicting injury upon the calf by scouring. The better plan is to put the bran and chopped oats and pease, with linseed in a dry state, into a box conveniently placed within reach of the calf. Between the ages of one and three weeks most calves will begin to eat the mixture. The chewing necessary to a comfortable swallowing fits the feed for proper digestion, and prevents all risks of scouring from that cause. The chewing also favours the free flow in the mouth of a good deal of saliva, needed to thoroughly digest the milk gulped down so hurriedly from the feeding pail. Linseed and oil-cake may be boiled, or well scalded, and mixed in a syrupy state with the milk. Such preparation means time and trouble. Equally good results follow from the feeding of both, in the raw and dry state, with the mixture of bran and chop. They should first have been ground very fine. The composition of the additional feed should be about equal parts by bulk of bran, oat, and pea chop, with a teacupful of ground linseed to each quart of the mixture. No fixed quantity per head for feeding need be mentioned. It has been found desirable to allow the calves to take as much as they care to eat. Handfuls of the best hay—and all hay for fodder should be cut on the green side—may be offered, and most calves will eat with relish at a month old. As soon as the grass can be got it should be given in liberal quantity.

Opinions differ as to the relative advantages of keeping calves in the stable all summer and allowing them the run of a small pasture field. A grass plot with no shade from the sun, and where flies are numerous and diligent, is not the best place for calves. But if the calves be kept in a dark, cool stable during the hot days of "fly time," and turned out for the evening and nights, the protection of the soiling system will be coupled with the benefits of exercise and feed outside. Some farmers report very satisfactory results from adding pulped turnips to the forementioned grain mixture from the time the calves are three weeks old. No matter where fed—in the stable or out—each calf should receive only its own allowance of milk. The distension of stomach by overfeeding is very harmful. The oldfashioned implements for the feeding of six calves in the field, being but three buckets and one big stick, had better be exchanged for more sensible and economical conveniences. Outside feeding from a trough is unsatisfactory, as the big and greedy calves get more than their share, while the weaker ones get barely enough. The construction of small stalls for the calves against a fence in the plot will make it easy to give every calf its own share in its own pail, and successfully avoid the respective risks of gorging and starving.

Calves reared in this way will gain in size and strength of constitution all spring and summer and autumn. When the severe weather of late fall and winter comes, it finds these calves accustomed to live mainly on grass and dry chop feed, so that the change to stable and winter conditions of existence is not very trying. The best conditions for profitable growth having been supplied by the intelligence of the owner, the inherited good qualities of the calf will get fair play. But if good qualities of breed inherited from the best of stock be baulked at the beginning by unsuitable conditions for growth and thrift, all chance of after profit from milk or fattening is gone. The profits of dairymen are to be largely augmented by proper attention to the early feeding of early calves. Such stock-raising will foster the export trade of fat cattle, and enable farmers more numerously and satisfactorily to patronize either a cheese factory or a creamery.

The Disposal of By-Products by Hog Feeding.

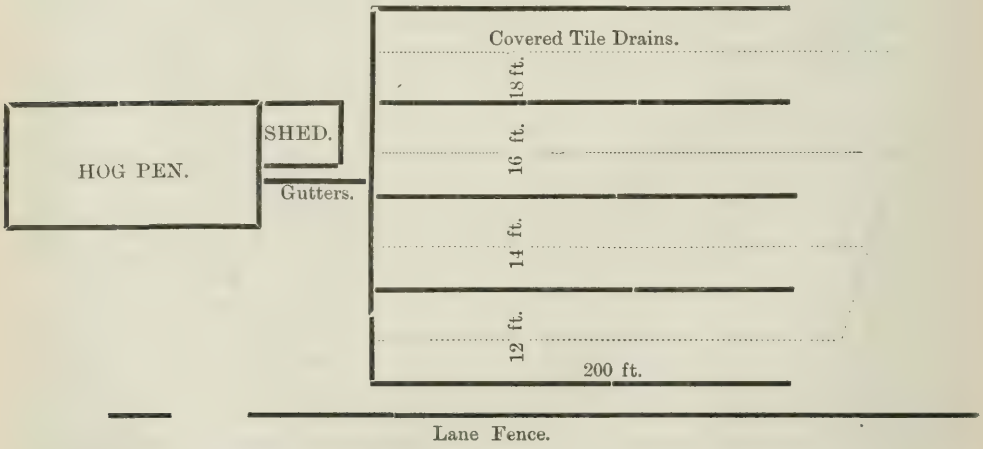
The feeding of a large number of hogs near a cheese factory or creamery has for some time been recognized as a nuisance to those living in the vicinity; a nuisance to the health of the population, and a source of trouble to the factory operators. All this is so because

at most places no adequate provision has been made for the disposal of the refuse from the pens. A hog-pen was constructed on the Experimental Farm in June, for the purpose of testing the adaptability of a system of draining and filtrating such refuse, rather than to gauge the gallon-value of butter-milk or skim-milk for pork production. The site for such a building should, if possible, be chosen near a piece of land with a gentle slope. The building was so planned and erected as (1) to most conveniently meet the needs of the hogs for fattening; (2) to prevent the escape, except by the gutters, of any liquid manure; (3) to be economical in cost.

The inclination of both floors toward the centre of the building permits of the hogs lying on dry floors all the time. This is important for thrift. The cleaning out is easy of accomplishment, and the disagreeable smells are reduced to a minimum. From the gutters the liquid refuse passed into a cross-head open trench about one foot deep. From it were made five lateral trenches running down the slope. A 12-foot distance was placed between the first two, then 14 feet to the next one, 16 feet to the next, and 18 feet to the last. Between these lateral trenches, and running parallel with them, were dug four drains 2 feet 6 inches deep. These were laid with 2½ inch tiles and filled up. The liquid refuse was diverted by turns into the trenches and, by a plan combining irrigation and downward filtration, passed off into the tile drains. The method worked well during the past summer. The soil between the trenches was cultivated and sown with rape, as the season was rather advanced before the drain-making was finished. The solid refuse was treated with dry earth in a shed at the end of the pens. Another year's experience may reveal some weakness or defect in the method described, but so far I am led to hope that it will prove effective in abating all objectionable and dangerous smells from cheese factory, creamery or hog-pen refuse.

A sketch of positions may make the description more fully understood by all interested.

OPEN TRENCHES



Fifty hogs were fed in the experiment.

III.—COLLEGE LECTURES.

Lectures on Dairying were delivered to the students of both years during the Spring term. Further instruction in practical butter-making was given to some eight students during parts of the Summer term.

A short course of lectures during the Winter term for the special benefit of practical cheese and butter-makers would doubtless prove a popular and valuable provision for

those engaged in these increasingly important industries. The enterprising and energetic young men in both of these businesses would carry back into their own districts added knowledge and skill that would effectually tell for the profit of their patrons. A fortnight or three weeks would suffice, and I am confident such an opportunity would be appreciated and taken advantage of by many of our older as well as younger dairymen. Discussions could be encouraged after each lecture, and much valuable information thus elicited could not so fully be made available in any other way.

IV.—OUTSIDE INSTRUCTION AND EXPERIMENT.

The suggestion and recommendation in the preceding Part will not be taken to imply an undervaluing of the superior uses of practical instruction and demonstration at the factories during their working season.

By request of the Dairymen's Association of Western Ontario, a number of cheese factories were visited during the summer. The cheese-makers from neighbouring factories were invited to meet at central ones. The best methods of handling the milk, etc., in all stages of the process of manufacture were illustrated in practice, and the scientific reasons for such treatments were explained.

A number of creameries were visited for a like purpose. Reports credit these visits with beneficial results.

There is need for organized Provincial supervision, including systematic instruction by competent men at the various factories of the whole cheese factory and creamery systems of Ontario. One man's time is not at all equal to a task at which seven good workers could be fully occupied, with much benefit to the industry and gain to the country.

No experiments in cheese-making were practicable at the creamery. The only milk available was that from the twelve cows mentioned in Part II. To meet the need, the Dairymen's Association of Western Ontario voted a sum of $300 to purchase milk at a cheese factory for experimental work.

Milk was obtained at the Brussels cheese factory, and a quantity of cheese was made there. Different lines of investigation were followed in connection therewith. A careful test was made to determine the comparative merits of the various brands of Canadian and English salt for cheese-making use. The results on the whole, taking into account the qualities of the cheese at five weeks and five months old, were decidedly in favour of the Canadian salt. A full statement of the experiments and conclusions will be found in the "Report of the Proceedings of the Convention of the Dairymen's Association held at Ingersoll, January, 1887." The cheese, of course, became the property of the Association.

The want of a salt for butter-making that would meet the needs of the creamerymen all round, both as to quality and price, was recognized. The essential points of quality have already been stated. At my request a sample of salt was prepared for this Department in the following simple way: Brine—practically pure—was evaporated rapidly. The rapid evaporation induced the formation of much thinner flakes of salt-crystals than when a less intense heat was applied. The bulk of salt from these thin crystals was dried by exposure to the air, and not by roasting. It just met the case for butter-making. It was practically pure. It dissolved easily. The grains were fairly uniform in size. It had no sharp-edged, roasted crystals that might have escaped the grinder. It was velvety to the touch. Canadian salt manufacturers are losing a valuable customer while they neglect to meet the wants of the Canadian dairyman with such a salt, put up specially for butter-making.

V.—OUR CHEESE AND BUTTER AT THE COLONIAL EXHIBITION.

The holding of Industrial Exhibitions in the different parts of the world, and their development and extension have been at least contemporaneous with marked progress in the arts and industries therein represented. The stimulus given to trade, from the prospect of the unexpected competition in all branches of commerce which a largely patronized exhibition always reveals, must have had some influence on that progress. There is the incidental inducement to the visitors to become purchasers, then or afterward, by seeing a varied and novel collection of goods. There follows the enquiry by the private citizens from their merchant suppliers as to where and how certain goods seen at the Exhibition can be purchased. Thousands of permanent customers are thus obtained for all classes of goods. Then from visiting such places the shopkeepers and merchants conclude that they may with advantage add some new articles or features to their business in their own towns, all of which means more customers. Besides, there is the best kind of commercial education offered to all contributors by the displays of their competitors.

The aim of those who proposed and promoted this great Colonial and Indian Exhibition in London was to bring together evidences of the resources, products and manufactures of the several colonies and dependencies for the promotion of the commerce of the Empire. There was no intention of making the Exhibition a competitive one, by giving awards of juries as to the particular merits of any class of exhibits. The only competition that existed was a friendly rivalry between the exhibitors and colonies, as to which of them could bring forward the most conclusive evidences of their natural prosperity and commercial wealth and strength. In preparing for the beforementioned object, the Royal Commission who had charge of the arrangements secured the use of the South Kensington buildings and grounds adjoining and attached to the Albert Hall. The buildings are quite commodious and extensive, and are very well adapted for such occupation. The beautifully laid-out gardens and playing fountains were additional attractions for visitors.

The time at which the Exhibition was held was, perhaps, the most fitting that could have been chosen. The population of the whole empire for some time before had their attention drawn to the possibility of a closer administrative, fiscal and defensive union of its many dependencies. A full recognition by the different colonies and the mother country of each other's resources, manufactures, commerce, customs and capabilities would make perhaps the most substántial foundation, or basis, for any such agreement or federation. Indeed, if any such federation should ever be consummated, the credit will be largely due to the success of this Exhibition, and the facilities it afforded the people of all parts of the empire for becoming acquainted with each other in the manner just indicated. The Courts of the Exhibition may be said to have been a series of object lessons, informing the visitors what each colony could and did do, and thus making a succinct history of the agricultural, commercial and social development of each. Those who examined them with care and thought could not but leave with a higher estimate and more just appreciation of the value to the mother country of both Canada and Australia.

It was expected that the Exhibition would continue for six months; as a matter of fact it lasted six months and ten days. The attendance during the whole of that time was surprisingly large for one of its class. The visitors numbered, in round figures, five and a-half millions, being an average of about 34,000 per day. The largest number attending upon one day was 81,000. It is reasonable to expect that many benefits will accrue to this country from having its products examined by this incessant stream of 34,000 people per day. A valuable stimulus to immigration of the right classes will doubtless result from the impressions left upon so many minds, the effects of which will probably be felt with advantage by Ontario for twenty-five years to come.

The Dominion Government having referred the matter of making a worthy display of dairy products to the Governments of the Provinces, I may be allowed to rehearse the steps taken to make the Exhibition truly creditable and serviceable to all those interested in this increasingly important industry in Ontario. The Presidents of the Dairymen's Associations of Eastern and Western Ontario were consulted as to the best mode of procedure.

In accordance with their recommendation, a quantity of fine fall cheese of 1885 make were purchased and held for shipment to reach London in time for the opening in May. Through some unfortunate failure on the part of the companies employed by the Dominion Government to carry the Exhibition goods through as expeditiously as usual, these cheese did not arrive in time to be used in making an opening display. Some of them were stored in London, to be used later in the season. Further on, mention will be made of the excellent service they rendered.

During the summer of 1886, when it was possible to procure cheese of the summer make, another consultation was held with T. Ballantyne, Esq., M.P.P., representing the Dairymen's Association of Western Ontario; D. M. Macpherson, Esq., Lancaster, attending on behalf of the Dairymen's Association of Eastern Ontario: John Hannah, Esq., President of the Ontario Creamery Association, and the Professor of Dairying from the Ontario Agricultural College. To them was entrusted the task of selecting and collecting contributions from cheese factories and creameries. In the west the local dairy boards of trade were invited to appoint experts to assist in the work. John Podmore, Esq., Ingersoll, and John Robertson, Esq., London, rendered excellent help. The ready response on the part of the dairymen in all the districts of the Province enabled the committee to obtain such samples as to make the whole exhibit fairly representative of the cheese and butter made both east and west. The Provincial Government had further agreed to advance money to pay for the goods so selected. In this way the exhibit became in every sense Provincial, and not sectional or individual. It was recognized that all possible advantage could not be reaped from the Exhibition unless some person should take charge of the goods upon their arrival in London who would be competent to compare, contrast, and point out the characteristic excellencies of Ontario's cheese and butter over those from other countries, competing with ours in the British markets. It fell to my lot to try to accomplish that. The fine goods sent forward made the duty light. On the 11th September I sailed for England. The display was well commenced by 1st October. There was decided gain in reaching the Exhibition with a new feature when the other departments were comparatively old and threshed out in the press of the Metropolis and country. The public interest and attendance continued unabated. The courts were daily thronged by enquiring crowds of sight-seers who evidently came to be amused, and left largely instructed. The space allotted to Canada in the building was scant enough, and not in itself the most desirable. But it became the most attractive by reason of its varied and interesting contents, and their admirable arrangement. Just enough room was got to indicate what Canada could do, had she a full opportunity to do justice to her desire and powers.

By the courtesy and help of Mr. C. C. Chipman, the acting commissioner for the Canadian court, space in a prominent place was secured on my arrival. At the side the Canadian Agriculture trophy were placed Ontario's pyramids of butter and cheese.

The total quantity received was :—

618	Boxes Canadian cheddars (white and coloured);			
300	Canadian truckle cheese;			
8	Monster Canadian cheese;			
299	Tubs Canadian	creamery	butter;	
10	Firkins	do	do	do
2	Tierces	do	do	do
480	5 lb. Tins	do	do	do

With these, it will be seen, it was possible to make a display even in point of magnitude worthy of the industry. Two pyramid frames with surrounding shelves were erected. The edges of these were decorated with strips of colored paper on cloth, on which were printed instructive facts relating to the exhibition, and inviting visitors to "take home a sample" from "Ontario's display of butter and cheese," etc. Then ornamental cards of varied shapes and colours were attached. These had such information as "Ontario's cheese and butter are all from pure whole milk." "Ontario makes no oleomargarine, no butterine, no imitations." "Ontario leads the world in cheese-making." "Ontario has

752 cheese factories." "Ontario has 40 creameries." "Ask your grocer for Canadian cheese and butter," etc., etc.

It was not thought that the mere display on the shelves would serve our interests as well as might be done by the distribution of samples. Hence your representative considered that some means should be taken to put samples of the best in the mouths of the visitors while they admired the general appearance of the dairy pyramids. Facilities were soon provided at four counters in different parts of the grounds. Samples of cheese to be sold at a penny and twopence each were done up in neatly printed oil paper wrappers. The call for these was very good. In less than five weeks nearly 40,000 samples were so sold, and in many cases the cheese and wrappers were carried back to mechanics' and farmers' homes. The wrappers set forth such information as this :

ASK YOUR GROCER FOR CANADIAN CHEESE.

SAMPLE OF CANADIAN CHEESE

FROM THE

ONTARIO GOVERNMENT'S EXHIBIT

AT THE

COLONIAL AND INDIAN EXHIBITION.

———)o(———

The Province of Ontario, Canada, has now over 750 Cheese Factories in Operation.

Canadian Cheese is as fine as English Cheddar Cheese and finer than three-fourths of the English make.

Canadian Cheese sells for 4s. per cwt. above American Cheese.

The average price of Farms in Ontario is $37.00 (£7 12s.) per acre.

The average rent value of farms in the older settlements is from $2.30 (9/5) per acre to $3.50 (14/4) per acre per annum.

ONTARIO HAS A SPLENDID CLIMATE FOR DAIRYING.

ASK YOUR GROCER FOR CANADIAN CHEESE.

ASK YOUR GROCER FOR CANADIAN CHEESE.

ASK YOUR GROCER FOR CANADIAN CHEESE.

That means of advertising the lands, etc., of the country will be of service to Canadian farmers for many years to come. It was complained by some from our own Dominion, that

the retailing of samples in this way should have been thought quite beneath the dignity of the Government of the Province of Ontario. I thought then, and have continued to think since, that the smallness of the common sense and commercial sense faculty of these croakers was alone responsible for such small talk. No matter how large in the aggregate may be the value of butter and cheese exported by Ontario annually, it must be ultimately distributed in small quantities and consumed by not more than mouthfuls. To give away samples to all who would have taken them would have involved heavy additional expenditure, while the desired end could be more advantageously attained by selling at a small price than by giving away for nothing. The exhibition throngs talked more about and tasted and tested with more interest and took home with more care what cost them only a penny than what they got free.

Enquiries directed by persons so tasting our cheese butter to their grocers brought me from the latter many letters, asking where and how equal qualities could be regularly obtained. Instead of seeking to supply these shop-keepers from the exhibition, I referred them to wholesale firms in their own districts accustomed to handling Canadian goods. I judged that such using of already established agencies of trade was preferable to arousing the jealousy, and perhaps the opposition, of importing houses by selling direct to grocers. I think he best serves the interests of the industry he represents who encourages and strengthens as far as possible the already established and legitimate agencies in commerce.

In another part of the ground a further display of butter and cheese was made. The use of a suitable building at one side of the gardens was obtained for the storing of surplus boxes and tubs. There it was convenient to show goods to persons directly interested in the trade, by whom a closer examination and comparison of the different lots was desired than was practicable at the central pyramids.

The subjecting of the different lots of butter to much boring by the "tester," lessened the immediate market value of many of the tubs, but that loss was of little consequence in view of the after advantage to the industry from the high quality of "Canadian creamery" being well known by the trade.

I did not find the re-packing of samples of butter in small tins easily practicable nor prospectively serviceable, and hence very few packages smaller than the five pound tins which had been prepared at the Ontario Agricultural College Creamery were offered on the counters.

Good service was rendered by the cheese of the make of 1885 before mentioned, and sent over in care of Messrs. Ballantyne and Macpherson. Often prominent dairy experts would say that while our Canadian cheese was very fine when comparatively new, it lacked good keeping properties. To such I would sample these cheese over one year old. Among the well known dairy experts to whom I showed these cheese were Mr. H. F. Moore, of Frome, and Prof. Fream, of Downton Agricultural College. The expressed opinion of both was that these old cheese were as fine then as any cheese in the whole exhibit, and so fine that to them the cheese awarded the first prize at Frome dairy show would have made but an indifferent second. At Frome is held the largest cheese show in England. Mr. Moore did us the justice and service of writing an article to the London *Times* containing the same statement.

I also sent samples of the cheese of 1885 and '86 and some tubs of butter to the dairy show held at Kilmarnock in Scotland. It is by far the largest dairy show in the United Kingdom. On this occasion there were no less than 645 entries, and in the show and fair not less than 18,000 cheese of British make. The unanimous verdict of experts who carefully examined the Canadian cheese was that there was nothing on exhibition finer than the cheese of 1885 from Ontario, then over twelve months old.

The dairy display received a good deal of attention from the press of London and England, which will not fail to effect some valuable results for dairymen. I quote parts of articles from only three of the many papers containing favourable comment.

The *Canadian Gazette* had the following and a number of other articles:

ONTARIO DAIRY PRODUCTS IN BRITISH MARKETS.

It has been left to the closing weeks of the exhibition to witness one of the most practical of Canadian exhibits from a directly commercial point of view. Visitors acquainted with the leading industries of the Dominion must often have been struck, when visiting the Canadian section, with the absence of any adequate representation of the cattle raising and dairying trades of eastern Canada. This deficiency is now fully made up at least from one Province by the joint action of the Eastern Dairymen's Association of Ontario, the Western Dairymen's Association of the Province, and the Ontario Creamery Association. These three bodies have united, and together sent over 500 boxes of the finest Ontario and Stilton cheeses, contributed by some forty different factories throughout the eastern and western sections of the Province, and about 100 tubs of fancy creamery butter, to be followed by 150 further tubs this week. These goods are now being arranged on the south side of the eastern transept of the central gallery, in the form of two trophies of cheese and butter, and a side display of fancy packages of butter and small Stilton cheeses. The exhibit is in charge of Mr. James W. Robertson, of the Dairy Department of the Ontario Agricultural College, at Guelph, from whom the following information, in regard to the exhibit, was elicited in the course of a conversation with our representative:—

"'The object of our display is,' said Mr. Robertson, 'to introduce our best Canadian cheese to English consumers. Hence a good portion of the cheese will be sold in small quantities to visitors in the course of the exhibition, while the balance may be disposed of direct to retailers here, so as to allow of no mistake as to its being Canadian cheese. We feel very strongly in Ontario the imperative necessity of taking active steps to bring the good quality of our cheeses before the direct notice of the consumers here. We have not had fair play in the past. Formerly—*i.e.*, eight or nine years ago—Canadian cheese was sold here as American, but the Centennial Exhibition so revealed the superiority of the Canadian Product, and we have since so steadily kept the lead, that our best Canadian Cheddar is often now, on reaching this market, sold as English Cheddar, while inferior English qualities are often sold as Canadian. Hence a prejudice has not unnaturally arisen against our cheeses, though we hope yet to prove how unwarranted this prejudice is. Then in doing this we hope also to promote emigration. We are earnestly looking for the settlement on our fertile lands in Ontario of the English farmer, who has capital enough to enable him to buy land and have a surplus sufficient to stock it well, and at once enter upon dairying on a profitable scale. Nothing will appeal so much to this class of English agriculturists as the excellence of our product, and seeing that the best Ontario cheese is equal to the purest English Cheddar, and superior to three-fourths of English Cheddar, and is quoted at four shillings per cwt. above the finest United States cheese, we don't anticipate any great difficulty.'

"'How does the industry stand in Ontario?'

"'According to the last returns for 1885 we have in the province 752 factories in operation, with an output of nearly seventy-one and one-fourth million pounds, of the value of one and one-fifth million pounds sterling. The increase in the number of factories last year is thus only one, and in the output of four and one-fourth million pounds, though the fall in prices, which affected Ontario less than English dairymen, made the value of the 1885 output less by a quarter of a million sterling than that of 1884. Our present policy is to strengthen in every possible way by co-operation and instruction the hands of each dairyman, and past success gives reason for the expectation that we shall thus be able to keep in the front rank even in the face of keen competition. The great thing we have to fight against here is prejudice. This alone prevents Canadian cheese from selling as high as the fancy makes of English cheese. In this respect the London market seems as yet the most satisfactory, in that it regards our products with less of that unreasoning prejudice so common in many parts. English dealers need not, however, fear that we are

going to overdo the business. We are careful of that, and what development takes place will now tend in the direction of butter rather than cheese production.'

"'Ah, yes. Canadian butter might be improved with advantage, might it not?'

"Yes, it might, and will be, for we want to introduce it fairly into this market. It is true that our butter has a bad reputation here, and perhaps deservedly so, but the Canadian Creamery butter is now made in sufficient quantities with us to be exported. We have good samples of this creamery butter in the exhibit, so as to open up a market for it."

"'What is the distinction between dairy and creamery butter?'

"'Well, dairy butter is just the butter made at a private dairy by farmers and their wives, without either of them being skilled in its manufacture. Creamery butter is the product of the butter factory, where the cream from, perhaps, one hundred dairies is collected and made into the purest butter by those skilled in every improvement. We are thus, you see, adopting with our butter the same factory system that has proved so successful with our cheese. Canadian cheese, when it used to be made at the farmhouses, was a complete failure, so far, at all events, as outside markets were concerned; but since the factory system has been introduced it has been a marked success. We have the prospect of at least twenty-five new creameries being erected in Ontario before next spring—that is, twenty-five butter-making factories. The farmers form joint-stock companies, and erect the factories in many cases for the disposal of their produce. In other cases the factories are built by private capital, and the owner of the creamery charges a commission for the manufacture. It is easy to see the great aid this system is to the best methods of manufacture, and how the market naturally discourages the home production of dairy butter and favours the product of the creameries. The difference is that, were Ontario dairy butter may be worth barely 12 cents per pound, creamery butter will be worth 20 cents per pound. The commission of the creamery owner would be, say about 4½ cents per pound, leaving an advantage of 3½ cents per pound to the farmer who makes use of the creamery rather than attempting home production. We have a creamery at the College at Guelph, and have sent over samples of butter made there. We have also something new here in the way of five pound tin package for retail sale in the place of fifty pound or one hundred pound firkins. The experiment is, we think, worth a trial, a five pound package being of a convenient size for family use,'" etc., etc.

The *Morning Post* wrote as follows:

"During the past two weeks there has been in the Exhibition at South Kensington a display made by the Canadian Government of the greatest importance to the British farmer. It is that of cheese and butter from Ontario, the whole having been collected from some fifty factories, and brought over to the Exhibition by Professor J. W. Robertson, who is the head of the dairy department at the Ontario Agricultural College. An examination of this axtensive exhibit ought to be the aim of every cheese-maker in the country, for without an examination he can have no idea of the perfection to which the Canadian competition has been brought. The writer of these reports spent an afternoon in company with Professor Robertson and Captain Clarke (who is in charge of the Canadian agricultural exhibits), in an examination of these dairy products, the high quality of which would fairly astonish the cheese and butter makers of the country. That which was tried was two months old, and had been for ten days (and ten days of heat), in the exhibition. It was not at all salt, the natural texture was well preserved, it was well and solidly worked, and of fine meaty flavour. It was equal to our best butter, and this, it is said, can be placed on the English market at 1s. a pound. There was none better at the London dairy show. The Canadians are trying hard to meet the markets in this country, and this butter will be imported fresh in five pound tins, which can be obtained regularly by the householder. But it was in the cheese department that the greatest perfection has been obtained. Here there are in all some 400 cheeses, all made on the Cheddar system, and all of a uniform high quality. Out of the 1,000 cheeses shown at Frome last month it would have been impossible to have selected 50 cheeses of such a uniform quality as the 400 on exhibition at the Canadian court, while the first prize

winners at that show would have been run very close indeed by most of the Canadian. The cheese shown vary in size, the "truckles" being about four pounds smaller than those usually made in the west of England, and the ordinary sizes weighing about fifty pound to seventy pound against the eighty pound to one hundred pound of the deep Cheddars of the west of England. The Canadian cheese is also earlier in maturing than our own Cheddars, the cheese in the exhibition being about six weeks old, and being then well matured. At that age our English cheese would be still soft and curdy. The Canadian cheese is mellow, silky, and meaty to the palate, solid in body and of fine grain and texture, is rich and nutty in flavour, and is shapely in size, clean in appearence, and smooth and clear in the skin. It is a great pity that at the show at Frome a few lots of Canadian could not be sent for competition, for it would prove such an "object lesson" to the farmers of the West as they would not soon forget. This exhibition opens up a very great question for the English cheesemonger, and that is how it happens that Canada has been able to produce so even and high a quality of cheese. It is not in the factory system that the answer is to be found, for the United States has factories, and its cheese is much inferior to Canadian. Cheddar cheese has really become the world's cheese, and it is made not only in various parts of Great Britain, but on parts of the Continent, in Canada and the United States, and in the antipodes. In the latter place Victoria produces a higher quality than other place. The subject of Cheddar cheese in every part of the world requires to be investigated, and a more useful work could not be undertaken by the Department of Agricultural at Whitehall. A good investigation would give such a mass of practical details that could not fail to be useful."

The following extract is taken from the *Daily Telegraph:*

"Two or three years ago Canadan butter was made at each farmstead, with every possible grade of care and negligence, science and ignorance, with the net result that a small portion was excellent, a certain quantity middling, and the bulk grading downwards to 'very inferior.' Two or three years ago co-operative dairying was started under the auspices of the Government and under the supervision of the Ontario Agricultural College. The idea of this system is that the farmers of a district possessing 500 to 1,000 cows among them send their milk to a creamery. There it is treated in a most scientific manner by skilled hands using the best machinery, the result being that butter is produced of a uniformly high quality, the farmer receives a better price and the public a better article. Professor Robertson, of the Ontario College, is now in London representing his Government at the Colonial Exhibition, and he has explained the principles on which the system is worked in his Province, which has led the way in the Dominion; and his exposition goes to show that the colonists have applied strictly scientific theory and art in the attainment of their object. They have recognized first of all that butter has a natural texture which is destroyed by mixing and too much handling; and second, that it is a material which undergoes a natural ripening or maturing process, and that this may be hastened or retarded to suit the requirements of commerce. Taking these points together, it may be said that the finest product is only possible where the butter is made from the best milk, by the most careful processes, untouched by hand, and when it is brought to market just at the time when its oxidation or mellowing by contact with the air brings about the mature or riple flavour. In Brittany, England and Ireland, butter is usually made in shallow vessels, and at a rather warm temperature. The result is quick oxidation—soon ripe, soon spoil; and an excess of salt is used to prevent it from bocoming rancid. The Canadians use, on the contrary, deeper cases, submerged in cold water, and their fresh butter will keep easily from three to five weeks; with a very slight covering of salt, and packed in suitable tins, it will keep good for a year. They can send perfectly fresh butter to the English market, and the probability is that in a few years this will be done to a large extent. In Canada the whole cost of collecting, churning, providing packages, salt and other necessaries, is 2¼d. per pound."

My own pen was not idle in the matter of commending our dairy products and the natural and good features of Ontario for farmers' homes. Thinking that two of these

letters may contain some information of interest to Canadian readers I take them from *The Daily News.*

BUTTER MAKING.

To the Editor of the Daily News:

"SIR,—I read with much interest your remarks on the butter trade in your Agricultural Notes the other day. It cannot be without commercial benefit to the country that your paper evidences such a lively concern in its great agricultural interests. Very timely, indeed is any discussion that tends to enlighten on the dairy industry, which is fast coming to the front, in the northern latitudes of the Empire, as the main and most profitable branch of farming. The town and city people need information as much as the dairymaids of the country. And the instruction of the city consumers as to the 'hows,' 'whys,' and 'wherefores' of butter-making, would quickly and forcibly tell in a prosperous propulsion to the trade wherever intelligently, tidily, and scientifically carried on. Fine butter is a table luxury which will always be cheerfully paid for by the masses, at a price profitable to the makers; and while its 'fineness' of quality is eminently the characteristic which gives to it, and through it to the dairyman. superior and profitable value, the same 'fineness' is that which really costs nothing extra of cream or labour to produce. When British dairymen—English, Irish, Scotch and Canadian—all learn how to add or rather conserve the natural 'fineness' of flavour in their really nutritious butter, the price will come up to an abundantly profitable figure. By butter-making there is hardly any appreciable exhaustion of the fertility of the soil; by it there is provided remunerative employment for many extra workers; and out of it the producer (the farmer) realizes a larger percentage of its ultimate cost to the consumer than from almost any other article he sells. That all being so, why is it that the British and Canadian farmers do not supply all the butter England and Scotland want? If British farmers would but adopt the Canadian methods of manufacture, and British consumers but become acquainted with the excellencies of Canadian creamery butter, the question would not need to be asked. Herein is a subject for the investigation and consideration of agitators for Imperial federation. The vitality of any scheme of federation will be proportionate to its power for promoting the interests of all the individual citizens concerned. The increase by it of everybody's comfort and safety, and the making of life to the people richer in its opportunities and enjoyments, will alone make federation desirable, durable, or endurable, or by it strengthen the Empire. Whatever facilitates the interchange of excellent food commodities will be the harbinger of closer union. Therefore, through your columns, I seek to speak to Canada of England's unsupplied need of fine, pure butter, and to England of Canada's power and resources to supply it; and, besides, in the supplying of this food-need, to give therewith such apt and acceptable dairy information and instruction as will direct England's and Ireland's and Scotland's farmers to do better for themselves.

"In every department of agriculture, the colonies have learned and are learning much from the mother country. But the impetus given to life, in every avenue, in a new country, impels its population to the speedy development and combination of old and merely local methods into comprehensive, adaptable and applicable systems. This is true as applied to the dairying industry and other minor things, such as newspaper making, public policies, social customs, etc. The love of the new—the changed—for its own sake, is characteristic of the mental and mechanical methods of all young countries. However, in the case of a colony like Canada, healthfully fed by numerous additions of immigrants from old countries, with their tersely conservative habits, the native tendency is well corrected, and safe progress only is made. But what has that to do particularly with butter-making? Well, this. Canada can and does make as fine and finer and as uniform a quality of butter as the "Brittany mixture" so highly commended by the well-known butter merchant mentioned in your article, before referred to. Moreover the uniformity of Canadian creamery butter is not due to the 'grinding,' 'milling,' or 'mixing' of different samples into one homogeneous mass, whereby the natural texture and grain are all destroyed and the butter left as greasy as goose gravy. Canadians have adopted the good and the good only of the 'mixing' system. They mix the cream, not the butter,

from fifty to two hundred dairies at each creamery where finest butter—every package alike—is made by skilled butter-makers Uniformity and fineness of flavour, body and colour are thus obtained without the destruction of the keeping properties by the objectionable 'milling' process. Canadian creamery butter has only to be well-known in the London market to divert the trade that now goes to a foreign country into the channels which are being more widely opened between England and her Colonies. Let but English butter dealers lend their aid by introducing Canadian creamery butter to their customers —(and here let me remark that Canada manufactures no oleomargarine, no butterine, no imitations) —and much of the desired end of increased, closer, and more profitable trade relations between the mother country and her enterprising children will be brought about. Then, as soon as Canadian creamery butter is well known, English and Irish farmers will begin to inquire about the 'hows' of the system by which such results are obtained; and an early adoption of the creamery system into their own districts will soon be sought. Let the landlords, who are said to find many tenants unable to meet their rent obligations, take the lead in this matter, and the money which may be invested in factory buildings will yield 1,000 per cent. in the prosperity of the the tenants and the consequent increased value of properties. The Government of the Province of Ontario, having in view the development of a butter trade with England, on a scale equal to the export cheese business of the province—now over $6,000,000 annually—are about to exhibit a large quantity of butter and cheese, contributed from all parts of the province, at the Colonial and Indian Exhibition. Sample packages of both may be obtained by visitors. Inquiries as to the resources of the province and the nature of Canadian dairy systems, so far as the knowledge may further fore-mentioned objects, may be addressed to the undersigned at the Canadian court, Colonial and Indian Exhibition.

Your obedient servant,

Jas. W. Robertson,

Government Superintendent of Dairying for the Province of Ontario, Canada.

Ontario Agricultural College, (Dairy Department),
London, England, Sept. 28.

"Creamery" Butter.

The following statements are made in the form of a letter by Mr. J. W. Robertson, Government Superintendent of Dairying for Ontario, dated from the Canadian court of the Colonial Exhibition:

"For the moment the butter industry is exciting unusual attention and comment in the Press. Producers and consumers alike manifest lively concern for the improvement and extension of this most profitable branch of farming. Nor is the quickened interest confined to London and England. The news from Cork tells that Irish farmers and merchants are bestirring themselves, in the hope of recovering their once enriching trade, which lately foreigners have won from them. Nearly every article and letter on agricultural affairs makes more apparent the urgent need for some action. The Government might well implement their expressed intention 'to investigate the capacity of Irish resources for development by public works on a remunerative scale,' in connection with this business, and that, too, with unique advantage to Ireland at this particular time. By a simple calculation, founded upon the data of last week's market reports from Cork, it appears there is a difference of about £6,000 between the total value of the butter sold there during the week (about $33,300) and the sum that would have been realized (about £39,300) had it all fetched the price quoted for best quality. What a large loss every week to the producers on the butter of one market, due to the manufacture of irregular and inferior qualities. The loss indicated is not local nor peculiar to Cork, but is all too general over dairying Ireland and England, where butter is made at the farms without system. To prevent the continuance of such an enormous loss to the farmers of the country, and to protect and foster this valuable and elastic industry, surely comes within the

scope of Government duty. I am convinced that such a desirable end can be efficiently attained by the establishment of suitable creameries, after the Canadian system. By their general introduction a profitably and permanent enlargement of the trade would be immediately possible by the production within our own Empire of sufficient uniformly fine butter for our own people. Such a quality would always be in demand at remunerative rates. At the Ontario Agricultural College in Canada, the Government erected an experimental creamery some two years ago. The cream from nearly 1,000 cows is now received. The system of butter-making throughout the whole province is being rapidly changed and much increase of wealth is going into the country in consequence. The institution is educational, and free instruction in the management of creameries and the details of scientific butter-making is given to eligible young men. Why does not the Imperial Government aid English and Irish farmers in a similar way? Contrasted with the mixing, milling Brittany process, the Canadian creamery system has everything to commend it. The desirable keeping properties, which add much to the butter's worth, are by it conserved, and the natural and exquisitely delicious creamy flavour is preserved for weeks. The national importance of the subject will excuse me in encroaching further on your space to state in popular terms some interesting facts recognized by only a few experts.

1. The natural flavour of milk and its products reside mainly in their fat constituents.

2. While milk is quite new its cream or fatty portion is comparatively insipid or lacking in flavour.

3. By exposure to the action of the air (oxidation) the flavour is ripened or developed, and the colour of the cream and butter made therefrom is deepened.

4. A warm temperature facilitates and a cool temperature retards the development of flavour.

5. Thus, butter made from cream raised at the ordinary temperature of the atmosphere, in open shallow vessels (such as are commonly used in Brittany, England, and Ireland), has a much fuller and riper flavour when just made than butter manufactured from cream raised in deep cans, submerged in cold water, as by the creamery system of Canada.

6. The former butter has its best flavour within two days after it is made, while the latter, the creamery, may continue to have its best taste from three to five weeks afterwards.

7. The earlier development of flavour in that butter which is at its best just after churning proclaims it of the character defined by the fruit adage, "Quick ripe, quick rotten." For such butter, delicious while fresh, nobody claims keeping properties any more than for harvest apples the quality of keeping sound till Spring time.

8. On the other hand, the quality of creamery butter (as evidenced by the Ontario Government's display at the Colonial and Indian Exhibition free for inspection and examination by all interested) shows that it has excellent keeping properties.

9. The butter fat of milk is in the condition of minute globules. These are collected into mass by the impaction of churning.

10. Any after-working, "mixing," or milling, that destroys the natnral grain or texture of butter, thereby destroys its keeping properties, just as the bruising of fruit or the breaking of egg shells renders both of these commodities subject to speedy decay.

11. As an article of diet, delicious butter is very different in its gastronomic effect from oleomargarine or any imitation compounds.

12. Fine butter—its peculiarity—aids weak digestion by instilling its own atoms between the atoms of more solid foods, thus assisting in their disintegration for assimilation.

It will be to my satisfaction, as an humble servant of my own Province and of the Great Britain, to give any further information I can that will be helpful in promoting the prosperity of the farmers of the empire along the lines indicated."

These have since been copied into the leading British papers and journals devoted to the provision trade. Many inquiries came in consequence, and the information thus given about Ontario and Ontario's butter and cheese may be of some help in the further development of her natural resources. Numerous letters came from English, Scotch and Irish dairymen, seeking information about how to improve the quality of their goods. Any help in that direction that can be given would leave a larger and more profitable market for Canadian products. Though this is perhaps not the place to fully discuss that proposition, it may not be amiss to point out that during the months of November and December the consumption of some of the inferior and cheaper qualities of late-made English cheese very much weakened the demand for higher priced Canadian. The consumer is a very much longer time about consuming two pounds of inferior cheese than in disposing with satisfaction of four pounds of excellent quality. Every pound of inferior butter or cheese made anywhere shuts off the demand—by lessening the consumption—for at least twice its quantity of fine quality. The conclusion that the higher is the standard of quality of dairy products of our own and all other countries that compete with us, the more profitable will be the business for all producers, is indisputably correct. The exhibition is to be credited with doing something in that direction.

The criticism of some of the best buyers drew my attention to some of the defects which lessen the value of our average shipments of both cheese and butter. At the three dairy conventions I have pointed out these and detailed the slight changes in the process of manufacture that are needed to remedy or avoid them. I may condense the important points as lessons for cheese and butter makers.

Lessons for Cheese-Makers.

I. Uniform fineness of quality is required in *every* cheese of *every* lot.

II. A cheese with fine flavour and solid and buttery body, which will retain its rich ness after exposure by cutting, is wanted.

III. A smooth, bright rind, without cracks, gives additional value; also a neat finish as to shape and general appearance.

IV. Scaleboards should be put on just before boxing, and so as to stick closely to the surface of every cheese.

V. Cheese boxes should be made with stronger covers to safely stand the rough handling of transhipment. The cover bands should be $\frac{5}{16}$ of an inch thick.

Lessons for Creamery Butter-Makers.

I. An attractive, neat and clean butter package that will be decently ornamental to a provision shop will increase the value of the butter. Besides the packages already in use, a Canadian cask with wooden hoops and holding 112 pounds would meet with favour.

II. The use of impure butter cloth leaves an objectionable taste on the top of the butter, very seriously lessening its value.

III. Such salt should be used as may be tasted, but not felt by the touch of tongue or finger in the butter.

IV. Pure brine should be frequently poured on the butter while in store. A tallowy taste for an inch on the top is induced by neglect of that.

V. All butter for export shipment should be stored in suitably cold store-rooms from the time of making.

The need for attention to the last mentioned matter is so urgent that I take the liberty of stating the case at some length. In our competition with butter from Ireland, Denmark, France, Sweden, Holland, etc., we labour under difficulty in trying to put Canadian butter on the consumer's plate in the best condition to please the palate and nourish the body. In the matter of freight charges we are comparatively well off, but the circumstances presently existing of our largest production being at a time when safe

transportation is most difficult, and when the price in all consuming centres is lowest, is against us. The adoption, in a measure, of winter dairying might be recommended as a partial relief and remedy. Still this state of things exists, that in most of the June and July creamery butter is stored somewhere, either on this side the ocean or the other. Hence the providing of suitable storage that will prevent deterioration in quality, and consequent depreciation in price, is a manifest need of the business. In visiting creameries during the past summer I generally found the storage accommodation quite inadequate and unsuitable. Large refrigerators at convenient centres would be more economical for use than the erection of small ones at every creamery. Then there would be less risk of butter "going off in flavour" when kept in buildings exclusively used for that purpose, and looked after by men engaged for the definite work of regulating its temperature and preserving its contents. Such buildings would be of Provincial and national service and benefit. Watchful attention to a continuance of suitable conditions for preserving quality, with proper selection and classification, would gain us a higher reputation and price. Any quality under fresh-flovoured, sweet, delicious-tasting butter will be pushed out of the market by the finest brands of butterine. I am satisfied that by treatment as advised, June butter in nine cases out of ten would reach the consumer in better condition in November and December, or later, than by immediate and direct shipment in midsummer, followed by exposure to the humid air of English warehouses and shops. Probably the farmers would not receive their full share of the increased prices for a time, but additional wealth would be brought into the country, and the competition of commerce would soon equalize the distribution of profits. A rate of 5 cents per tub per month would amply cover all expense and allow a fair dividend on the cost of buildings. It would thus be possible to preserve the creamery butter, and put it before the consumer in England or elsewhere in its best state, and at the season of the year when the highest price may reasonably be expected.

The interests of the carrying companies are closely identified with those of dairymen. When the latter use only reasonably strong boxes and packages, the former should look after their safe carriage. The heated and damaged condition in which I observed some cheese to be discharged from the ships' holds will, if continued, speedily and justly lead to the withdrawal of Canadian dairy patronage from such vessels.

With the consumers, the shop-keepers, the wholesale dealers, and the importing firms, the butter and cheese from Ontario now stand in higher repute than ever.

Of the general influence of the dairy display from an immigration-fostering standpoint. I am not prepared to report. But this I can confidently write, that the apple, the honey, and the cheese and butter exhibits, all mainly under the care of Ontario men, did more to bring a true knowledge of the resources and climate of the Dominion of Canada before the public in an acceptable way than all the other departments of the Colonial and Indian Exhibition put together.

Commemorative medals and diplomas will be issued to all who contributed cheese and butter to the Exhibition.

My thanks are due and hereby tendered to all who aided me in the endeavour to make the display of cheese and butter from Ontario a success.

VI.—THE FARMING AND DAIRY SYSTEM OF DENMARK.

A few lines may be devoted to the mentioning of some things observed while on the journey from England to Denmark, which may have educational value for farmers in Ontario.

The route taken was by way of Queensboro'; thence by boat to Flushing in Holland; thence by rail *via* Bréda, Boxtel, Goch, Wesel and Hamburg to Kiel; thence by steamer to Korsør in Denmark and on to Copenhagen by rail. London was left on the 3rd December.

The continental railroads travelled over were well equipped. The roadbeds, in respect of their construction, were between the English and Canadian styles in point of solidity

and durability. The engines seen were mostly of English make. The passenger coaches, which were comfortably upholstered and heated by steam, were built after the English pattern, with compartments across the cars, having entrances from both sides. The freight box-cars and trucks were much smaller and lighter than those in use on the Grand Trunk and Canadian Pacific Railways. The average rate of passengers' fare is lower than in Canada. On the German state railways there are no less than four classes of carriages. The fourth-class have no seats and are largely used by labourers travelling short distances to their work at very low rates.

A thin sprinkling of snow lay on the ground. The country of the Dutch surprises one by its generally flat aspect. The monotony of a prairie scene is absent, as canals and ditches scarify its whole surface. The fields have a rich alluvial soil of dark colour. Trees, visible from the car windows, were all of light timber and mostly scrubby-looking. After Tilburg is passed the soil has lighter colour ; and stunted shrub beech it plentiful. What seemed to be thriftless thorn and beech hedges disfigured the landscape.

The fields were mostly ridged up with deep furrows between the lands. Large fields of turnips looked very well. The kinds were mostly yellow and soft purple tops. On meadow lands the pasture was still fresh looking, with a good roughness of top for feeding or winter protection.

Great Don Quixote wind-mills, for grinding, were here and there lazily rolling round. The farm-houses were generally built of brick of smaller size than ours, and roofed with red or dark coloured tiles. Occasional groups of three or four houses close together, with moss-covered thatch roofs, seemed to have grown out of the ground on which they stood. After crossing the German frontier the country had very similar appearance to the undulating and fertile districts of Ontario. The woods were large in area and their trees looked as large as those in Canadian forests.

The farms appeared to be smaller and the barns were quite dwarf-like in comparison with bank barns on 100-acre farms in Canada. The peasants are rather slow-moving and sedate-looking people. The farm labourers still wear wooden clogs, kept on by the movement of the toes. Their stockings are without soles, and are kept in place by a leather strap around the instep and toe. For fuel, wood, peat or turf, and coal are used.

From Hamburg to Kiel through Holstein the county is generally flat, with blotches of turf, whence the peat is obtained for burning. The soil is very much assorted, many different colours being seen in single fields. The hedges of hazel, thorn and beech are neglected looking. The woods are about as heavy as in Ontario and mainly of elm and beech, with some light birch. At Kiel I inspected a creamery, but instead of detailing what was seen at each creamery or dairy visited I will gather into one place a description of the best points in butter making seen at the different places.

On reaching Denmark one is struck by the clean and well cultivated appearence of the farms. The soil is of boulder clay or boulder sand. Geological researches have revealed the history of its timber clothing at different periods. There was first poplar, then elm, followed in turn by pine, oak, hazel and beech. The present is still the beech period there.

The average annual rainfall is from 23 to 24 inches. The mean yearly temperature is 45°.

For a small country, Denmark deserves much praise for the long and thorough attention given to agricultural investigation and education. Outside the kingdom, the impression prevails that the Government of the country has financially and otherwise borne most of the burdens inseparable from the establishment and maintenance of educational means and facilities, which have been of much national benefit and have enabled the Danes, particularly in the making and exporting of butter, to gain the foremost place in the world for quantity and quality exported per acre of kingdom area.

The Government has all along maintained a friendly and fostering attitude towards the improvement of agricultural methods and implements, and has given liberal grants towards furthering scientific investigation and the dissemination of sound knowledge relating to land and its cultivation, as well as to stock and the manufacture of their products. But the agricultural and dairy instructors of the country have not been very

liberally fed at the public crib. Their success, and the really telling education which the young men and women have received, I judge to be due to the necessity laid upon all of them of largely helping themselves before they received Government assistance. That the Government should support agricultural and educational concerns merely for the sake of appearances does not seem to have come within the range of Danish administration.

As long ago as 1769 the Royal Agricultural Society of Denmark was established. It was originally founded for the purpose of promoting interest in and spreading useful information in relation to all rural industries. The main objects sought to be attained through its organization might be summed up as:

1. Holding of meetings for the discussion of matters having scientific and practical bearing on agricultural interests, as well as the publication and distribution of books and pamphlets thereon.

2. The employment of persons competent to advise farmers on dairying, on the care of stock and on the treatment of diseases of farm animals.

3. The institution and supervision of experiments, embracing chemical analyses, etc.

4. Arranging for and superintending the placing of apprentices on farms and in dairies, and granting certificates to such as comply with the conditions of service and prove deserving.

5. Acting as a central organization for the numerous local agricultural societies in the kingdom, and joining with them for the purpose of holding one comprehensive exhibition every five years at different centres.

6. Assisting in fostering the export trade of farm produce, and submitting to the Government reports on agricultural subjects.

In 1853 its membership was only about seventy, while now it has on its roll nearly one thousand members paying an annual subscription of a little over $5 each. Up to last year it received an annual grant from the Government of rather more than $800. That is now somewhat increased. It has a funded capital of about $90,000, part of the revenue from which is devoted to the maintenance of a few deserving pupils at the Royal Agricultural College at Copenhagen.

The local agricultural societies are very numerous and keep alive an active interest in the progress of farming knowledge and methods in the remoter districts. From these clubs delegates are sent yearly to form one agricultural society for each of the four provincial districts into which the country is divided for that purpose.

Both these and the local societies hold exhibitions every year, and the Government contributes to the premium fund dollar for dollar provided by the societies themselves.

Before proceeding to briefly trace the part taken by the Royal Agricultural Society in the development of agricultural education, mention should be made of the Polytechnic School, established in Copenhagen in 1829, and also the Royal Agricultural College of Denmark. This first institution, which seems to cover the same ground, educationally, as the School of Practical Science in Toronto, is very highly esteemed for its work in preparing thoroughly competent teachers for the Royal Veterinary and Agricultural College. At this school, in 1849, Prof. Jorgensen first commenced to lecture on rural economy.

A veterinary school had been in existence at Copenhagen from 1773. In 1856 it was decided to add to it a full course of instruction in all branches of agriculture. Then it became the Royal Agricultural and Veterinary College of Denmark. It is now entirely a Government institution, the expenses being met by an annual grant from the public treasury, which however is supplemented to a considerable extent by revenue from legacies and gifts invested for its benefit. There are twenty-two professors and thirteen assistants, besides the inspector and other officials upon its staff. The total annual expense is about $33,000, of which the Government pays about $28.000.

Its curriculum embraces five divisions, Veterinary Science, Agriculture, Surveying, Forestry and Horticulture. Then there is a ten months' preparatory course for those

needing further elementary instruction before taking up any special subjects. Two years' study are required to pass in either of the five divisions. A few students stay for four years and thus graduate in two departments. The fees are about $15 per annum for all lectures and the use of the laboratories and chemicals; books are extra.

The students find for themselves boarding places in the city. The cost, of course, varies with the accommodation required. The average expense for the year for fees, board ing, books, clothing, etc., was put by one of the professors at $250 per student. The plan of College boarding for the students was considered by the authorities as very undesirable and unsatisfactory.

The College buildings seem spacious for the number of students yet an early enlargement is looked for and promised. The class-rooms are fitted up in admirable arrangement. The museums are replete with specimens of every creature and skeleton that might be found on a farm. The skeletons of cattle, horses and sheep, which, while naturally clothed with flesh and skin had once won prizes at leading shows, now serve as models from which to lecture, demonstrating the desirable points of frame and build. Samples of all kinds of seeds and farm plants are daily handled in the class-rooms; working models of implements and machinery (ancient and modern) are taken apart in the classs-rooms as far as practicable, and the names, uses and manner of construction of each piece explained. So, also, with the various fertilizers of commerce.

The chemical laboratories are fitted up most completely and ample opportunity is afforded all students for practical work in analyses. The O. A. C. laboratory at Guelph is like a blacksmith shop beside a well-equipped engine works when campared with that at Copenhagen.

There is also a large botanical garden adjoining the college. One feature that delighted me was the full and clear labels attached to every shrub and bush. Some twenty acres are used to illustrate agricultural operations. The students visit the plots in company with the professors to watch and note the progress, differences and likenesses between plants and grasses at their various stages of growth.

For the use of veterinary students there is a suitable dissecting room, with excellent appointments. Under the charge of the same department there is a commodious horse hospital, where the disabled and sick equines of the city are stabled and doctored. The students accompany one of the professors of veterinary science on his morning rounds and receive clinical instruction.

A branch hospital is a retreat for the sick dog-and-cat pets of the capital. At this place we received a very noisy welcome. Horse-shoeing is taught in an adjoining building. A small dispensing laboratory is attached, where students learn how to prepare and compound medicines.

For use in his lectures on Dairying, Prof. Segelcké has models of all kinds of apparatus, used in nearly every country where cows are milked and butter and cheese are made. Especial attention is given to instruction in the use of and parts of the centrifugal cream separators.

Apart from the College stands the special dairy laboratory, under the charge of Prof. Fjord, who is assisted by three chemists and a number of other helpers. A Government grant is also made for its support (about $5,000 annually), and the whole time of these enthusiastic experts is given to investigation and experiment with milk, butter and cheese, and the utensils used in their manufacture. The chief chemist, M. Storch, whose name, together with Prof. Fjord's will be premanently engraved in the dairy literature of the century, kindly showed me over the place. The necessary limits of this report, and my unavoidably hurried visit, forbid an attempt at fully detailed description. Everything useful, seen or learned, will be communicated to the professor of chemistry at Ontario Agricultural College, who is with commendable vigour devoting much time to scientific dairy investigation. Besides the work carried on at this laboratory, many of the leading dairies of the country have appliances and conveniences for Prof. Fjord's use when he wishes to work at their places. Whatever improvement in dairy machinery is effected is made known freely to the public, and all useful discoveries are regularly published for the benefit of dairymen. Such elaborate care is exercised in all the work that the confidence reposed by the public in Prof. Fjord's conclusions is fully warranted and justified.

There have passed through the college course at the Royal Agricultural College—

455	in Veterinary Science	during	the	last	25 years.
258	in Agriculture	"	"	"	25 "
71	in Surveying	"	"	"	25 "
55	in Horticulture	"	"	"	18 "
82	in Forestry	"	"	"	18 "

These graduates become teachers in the lower agricultural schools, managers of estates, or follow the special vocation for which they have been educated, on their own account. By way of incitement to diligence the Royal Agricultural Society—formerly mentioned—awards to successful students premiums of sums of money, sufficient to enable them to visit different parts of their own or some foreign country, for further culture and acquisition of knowledge relating to their intended calling. Many instances are on record where diligent and persevering youths have risen from poverty and obscurity, to occupy foremost places of usefulness and influence.

I return to the part taken by the Royal Agricultural Society outside of the College, for the improvement of agricultural operations. From the beginning of the present century, it has been a very important factor in developing the country's resources. It first undertook the task of apprenticing young men to the best farmers all over the Kingdom for training and instruction. The conditions upon which youths were received were briefly : they must be native Danes, of good health and irreproachable moral character ; they must have a recommendation from a magistrate and clergyman, and express an intention to follow farming. When everything of that sort was satisfactory, the applicants were accepted for two or three years. Good farmers of approved standing were glad to take these youths as learners, paying them a small sum yearly, besides giving them board and lodging. Each apprentice was left for one year only on one farm, when he was removed to a farm in another part of the Kingdom. His third year was spent on still a different farm in one of the other districts. At the outset each apprentice received from the Society a number of books bearing on agriculture, which became his own property upon the completion of the three years. Reports were made to the Society at stated intervals by each apprentice. Then from these, and the youths' records at the places where they had spent three years, the Society judged of their progress and merits, and granted diplomas accordingly.

Such varied training gave the apprentices a wider knowledge, and more skill in regard to all farm work, than if they spent the whole period on one farm under one manager. After the Society had laid the foundations for the success of the system, the demand for apprentices, and the desire to be apprenticed, quite out-grew its capacity for oversight and management. Then the terms of the Society were accepted as the basis of engagement between youths and farmers direct. Thus the leading farms of the Kingdom have each become a centre for agricultural education. The plan whereby the young men learn the systems of farming, in all the districts of their country might be transplanted with much advantage, to the farming community of Ontario. The student apprentice's life was not by any means half work and half pay. They were at work by four o'clock in the morning, and, except for meals, did not knock off till seven in the evening.

By 1873 this same Society began to recognise the value of the dairy industry and the importance of and need for instruction. It took steps to learn of the best methods in dairy husbandry, followed in their own and other countries and by means of pamphlets and lectures set out to improve the manufacture of butter. In 1860 Prof. Segelckè was engaged as dairy chemist. Then his whole time was occupied in the work of apprenticing young women to the best dairies in the country. Considerable difficult was at first experienced by reason of the opposition of the chief dairymaids, who were secretive. This was finally overcome, and a small fee in every case, for a two or three months' course, allayed their jealousy and directed their tongues to teaching. From 1864, young men were apprenticed in the same way. They were accepted by the Society upon conditions similar to those affecting candidates for apprenticeship for general farming. The term of service, however, was usually three months, instead of three years. Each apprentice was

furnished with blank report forms, on which he was required. to report to Prof. Segelckè, once a week, a record of the operations of the dairy in detail. The supervisions and necessity for recording details of everything done, were very helpful in futhering the young men's education and progress.

By 1885 no less than 945 youths had passed through the course of training and received the society's diplomas. They were required to pay their own way, but no fees were charged for the Society's help. As in the apprenticing of youths to general farming, this, also, soon outgrew the need of the Society's control. Now nearly every dairy of note has many learners, accepted and trained by private agreement and arrangement. All this has told with marked effect on the general progress and appearance of the country. No antagonism is apparent between dairymen and other branches of farming. But as more attention has been paid to this specialty, so more progress and prosperity have attended the other departments of farm labour. While the Danes have been appropriately called a nation of dairy farmers they have not neglected the thorough cultivation of their farms for grain and root growing, nor ignored the profits to be made from stock raising and fattening cattle. From the export statistics it is learned that during the four years from 1869 to 1872 Denmark exported 69,838,730 lbs. of butter and 207,513 head of cattle; from 1870 to 1873, inclusive, Canada exported 61,976,234 lbs. of butter and 233,402 head of cattle; from 1881 to 1884 Denmark exported 133,061,193 lbs. of butter and 445,498 head of cattle; from 1882 to 1885 Canada exported 38,674,611 lbs. of butter and 360,771 head of cattle. These figures show that the development of the dairy industry is not at all incompatible with, but rather helpful to, the profitable extension of the export cattle trade.

For sixteen years, each, the export figures are:

	Lbs. Butter.	No. of Cattle.
Denmark, 1869–1884.....	433,492,488	1,401,918
Canada, 1870–1885.....	212,593,246	914,462

Enthusiastic engagement in the dairy business has led the farmers to keep more stock, and the keeping of additional stock has made the raising of larger crops of feed a necessity. It has also made the latter an easy possibility by the consequent increased fertility of the lands.

I had the honour and pleasure of visiting the estate of Baron Tesdorpf, who wears the proud honour of being acknowledged as perhaps the leading farmer in the Kingdom. He has under his direction no less than seventy student apprentices, besides his small army of labourers. I quote two of his courses of rotation of crops, which will give a general idea of the system of farming followed:

Eight-course rotation.	Four-course rotation.
Clean fallow.	Wheat.
Wheat.	Roots.
Sugar Beets.	Barley.
Barley.	½ Clover, ½ Beans.
Pease, Beans, Turnips.	
Oats.	
Clover to cut.	
Pasture.	

The same gentleman uses a phosphate fertilizer in the shape of ground bones very liberally. He applies from 600 to 700 lbs. per acre about every fourth or fifth year. His large herd, at the home farm, of some 250 milking cows, were a lot af very fine milkers. The daily ration for stable feeding while in milk for a 1,000 lb. cow was:

3 lbs. Bran.	7 lbs. Clover Hay.
2 lbs. Cake (Oil or Cotton Seed).	30 lbs. Mangels.
5 lbs. mixed Barley and Oats.	Straw without stint.

The mixture of chopped barley and oats for milking cows was very highly commended. For Canadian dairymen, I should recommend a mixture of barley, oats and

pease. General feeding practices that had been successful in different parts of the Kingdom I found to be very much as followed by our best feeders. A word or two of comment here will not come amiss. Bran was found to be more economical for milk production, together with grain, than the feeding of grain alone. All the richer feeds are fed with the coarse feed, both to encourage a large consumption of coarse feed and to promote the best results from digestion. The feeding of clover hay gives better results in milk than the feeding of timothy hay. A mixture of grasses will be found best in Ontario. These should be cut rather on the green side and well saved and kept. An excessive feeding of roots, even to the extent of one bushel a day, is judged to be wasteful and injurious. Straw from a grain crop cut on the green side is held to make excellent fodder. Ontario farmers may note that the practice of cutting crops rather on the green side would avoid loss of grain, leave it of brighter colour and better weight, and make the straw much more valuable for milk production.

The breed of cows now finding most favonr are the Angels (*g* is pronounced hard). In oppearance they resemble a cross between the Ayshire and Jerseys. It is not believed that they are descended from either of these breeds ; but possessing similar powers for milk production, they reflect these in forms somewhat alike. They are of a dun-red colour, shading into black on the neck and head.

The price in Denmark of a first-rate Angel Bull, with good pedigree, would be about $165, and that of a choice picked cow about $75. I do not recommend their importation. The average annual milk yield will be about 6,700 lbs. per cow, with an average weight of under 1,000 lbs.

The stables are constructed to provide for thorough ventilation, as the cows are often stabled for eleven months continously. Every care is taken to preserve the manure for use on the fields. Both liquids and solids are guarded from losing their fertilizing value. In some stables the manure is pitched under the cows feet, then covered with straw, and so allowed to accumulate for three months. No bad odour was detected as arising from that practice. At other farms, covered manure yards protect their contents against the washing of rains and the bleaching of the sun. At such places the liquids are conveyed to a central tank, and frequently pumped over the compost heaps.

The stable feeding has already been described. The ration mentioned is the usual one, and is divided into three feeds per day.

Water is given in the stables. Attention is paid to its purity, and it is offered freely. Cows have access to salt at all times.

On large farms the soiling system prevails, and cows are allowed out only one month in the year. That is either June or August. Where allowed to pasture during the summer the cows are usually tethered. Water is supplied by a watering cart driven along between the rows, and with convenience for each cow to drink.

The milking is mostly performed by women, who, generally in large dairies, milk twenty cows each, morning and evening. Attention is paid to the equal division of time between the milkings. From four to six o'clock in the morning, and from four to six o'clock in the evening, are the times taken. A superintendent sees to it that each milker washes her hands after milking every two cows. The utmost cleanliness is observed in all the handling of milk and its products.

A record is kept of the milk yield of each cow by weight once a week, and occasional tests are made of its quality. The average quantity of milk required to yield one pound of butter is about 25 lbs., by the certrifugal separator. At some creameries where deep setting was followed the average was 31 lbs.

The heifers drop their first calves when from twenty-two to thirty months old. The season of the year when most cows calve is from early December to late January.

Cheese-making is followed, to only a very limited extent. Skim milk mostly is used in its manufacture. The product is not very palatable, though it is rather more so than the soft varieties to be found in North Germany. The taste in North Europe seems to be for a soft, a very soft cheese, when made from whole milk : and if the odour is of an indescribably vile description, no objection is taken. The sense of smell seems to be dulled into enduring, or cultivated into relishing every kind of assult.

Butter-making is followed both on the home-dairy and creamery plans. The smaller dairies frequently unite to support a creamery, while the larger dairies of from 100 cows and upwards, can afford to manufacture their own butter economically. The shallow pan, deep-setting and contrifugal systems of cream separation, have all been tried, and in different places, are all still in practice. Progressive dairymen have abandoned the shallow-pan method for the deep-setting, during most of the season ; and are now adopting the centrifugal, as an advance and improvement on the latter. It is allowed that a fuller separation of cream is effected by the mechanical than by the natural plan—that the skim milk is left in better condition for calf-feeding—and that the butter has better keeping properties. The cream is better under the control of the butter-maker for ripening, and its butter has a higher melting temperature than when milk is set in the ordinary way for cream to rise.

Care is taken to have the centrifugal machines run at a regular rate of speed. The inflow is regulated to a nicety. Then the separation can be adjusted to any per cent. desired. The usual temperature of the milk is 86° Fahr. for mechanical separation. Where deep setting is practised the milk is heated to 100° Fahr. and immediately placed in ice-water tanks, and so allowed to stand till cream separates. For the best results from shallow pans the milk is poured into them while warm, and then left in a cool room. In both of the latter cases, the skimming is performed in the well-known manner, and always while the milk is sweet. Thus the cream obtained in bulk is always sweet.

To properly ripen the cream for churning a "fermentation starter" is prepared daily in the following way: As much milk as will yield cream, equal to two per cent. by bulk of the whole cream to be churned each day is taken from the evening's milk and set in deep-setting cans in ice-water. Sometimes it is set in shallow pans. The surface in both cases is left exposed to the air. In the morning this is skimmed. About 11 o'clock in the forenoon it is warmed to 72° Fahr., and placed under cover so as to retain its heat. By the following morning it will have become sour. The sourness is merely a result of the fermentation induced by the exposure to the air and after maintenance of warmth. This is now what is called the "fermentation starter." After the bulk of the cream is separated, if by the centrifugal machine, it is heated to 72° Fahr. and then put in tin-lined cream tubs. To it is added "fermentation starter" equal to two per cent. of its bulk about 11 a.m. The whole mass is allowed to gradually cool to 58° Fahr., and by the following morning, or after the lapse of about 18 hours, it is in the right condition for churning.

When the separation of cream has been effected by the natural method of setting, the bulk of the cream is heated to 59° Fahr., and then the "fermentation starter" is added, and the treatment is as above. These tempertures vary slightly with the season of the year and the length of time the most of the cows have been milking. So also the temperatures at which the churning is performed, the range being from 57° to 64° Fahr.

The churns in common use are the Holstein churns. The churn body is cylindrical and stands perpendicular, the bottom being winder than the top. On the inside and standing perpendicularly, are three or four blades of wood, fastened at equal distances around the inside. These stand out in width from three to four inches, and are about one inch thick. The churning is performed by means of a revolving dash whose axle stands perpendicularly. The churns vary in size, holding from 150 pounds to 300 pounds of cream.

The speed of revolution varies with the diameter of the churn. The smaller in diameter the greater number of revolutions per minute. By a simple calculation I arrived at the ratio of speed to diameter. The outside of the blades on the dash are made to travel about 700 feet per minute. Churning is completed in from 30 to 40 minutes. In the cover of the churn, provision is made for the insertion of a small stick or tube, while the churn is in motion, on which to withdraw a sample and learn the condition of the cream. As soon as the cream is churned into butter-particles about the size of clover seed, the churning is instantly stopped. This stage is watched very closely, as churning too long or stopping too soon are regarded as injurious.

The butter in the granular state is then dipped out by a hair sieve. As much as possible of the butter-milk is shaken off. The remaining butter-milk is worked out by hand

in hollow troughs. No water is used to wash the butter; the hand-pressing only is applied. The working is performed on small quantities of less than half a pound each, and each piece is folded and pressed some eight or nine times. They are then placed on an ice-box to cool for an hour.

Salt is then added. From three to four per cent. by weight is the usual quantity, though the salt is generally measured and not weighed. By measuring, instead of weighing, the moist or dry condition of the salt does not affect the salting power of the quantity added. In from one hour to three hours the salt will have fully dissolved and the second working is proceeded with. The highest temperature at which butter is worked is 60° Fahr. The firkin to be filled will have been previously prepared by soaking with cold water and then washing with hot water and rubbing with salt inside. The butter is immediately and finally packed away. Usually within four hours or less from the time when it leaves the churn, the butter is packed. In that way all disturbance of the grain of the butter by re-working after it has commenced to set is avoided. The butter has better keeping properties in consequence.

The package mostly used is the Danish cask, which is barrel-shaped, and headed in at both ends. It holds 112 pounds of butter, and is finished with wooden hoops. The butter is packed in very firm and close, and covered with a clean cloth, free from all impurity that would impart offensive flavour to its surface. A slight sprinkling of coarse salt is put both under and over the cloth.

Examination has been made by trial of the effect of cold storage on the after-keeping qualities of butter when exposed to the warm summer weather of England. It was found that the cold-stored and cold-carried butter was in every way better than butter from the same churnings that had not been so treated.

A considerable quantity of the Danish butter is packed in hermetically sealed tins in Copenhagen and shipped at very remunerative prices to markets in the East and West Indies, China, Brazil, etc.

A measure has been framed, and by this time I believe it has become law, making it a penal offence to manufacture any compound in imitation or of the colour of butter in the Kingdom of Denmark. Having won for themselves an excellent and valuable reputation, the Danes are setting their faces against the making of all counterfeit vilenesses.

For assistance rendered to me in the making of enquiries and gleaning the foregoing information, which I trust will be useful to the Dairymen of Ontario, my hearty thanks are due to Baron Tesdorpf, Rev. M. Weber, Prof. Segelcké, and Drs. Faber of London and Copenhagen.

VII.—GENERAL REMARKS AND CONCLUSIONS.

Looked at in its relation to other branches of farming in Ontario, dairying needs and deserves more attention from farmers and educators than it has received in the past. Everybody acknowledges that the most economical way in which to increase and maintain the fertility of farms is by thorough cultivation, and the keeping of large numbers of some kind of stock to consume the coarser grains and fodders. To those who prefer horses and sheep I have no advice to offer. But to those who go in for cattle I would say that dairying offers the best profits. Good milking cows leave margins above the cost of their keep; and better stock for economical and profitable fattening may generally be got from such cows, and reared in conjunction with dairying, than in any other way. There is an endless chain of annually increasing profit from the keeping of good cows on any farm. The more the cows kept, the more the stock reared and fed; the more the stock, the more the barn-yard manure; the more the manure, the richer the fields; the richer the fields, the better the crops; the better the crops, the more the stock that can be fed; the more the stock, etc., etc.

In those districts where milking cows are already numerous, but where no cheese factories or creameries are in operation, the farmers cannot too soon set about establishing the one or the other. The profits to the farmers from both are, on the average of years, about equal, when counting in the value of the skim-milk for calf feeding. The loss from dairy butter-making where a market for immediate consumption cannot be reached is very great, as has been already pointed out.

Then the dairy industry, even where well established, needs to be conducted on more progressive and profitable lines. The average yield per cow in Ontario is still deplorably small. Too much time has been spent in trying by manipulation to get the selling prices up, to the neglect of trying the more easily accomplished task of putting the producing prices down. That can speedily be effected by suitable and economical feeding and proper stabling, watering, salting and handling, as recommended. The line of possible profit is between the two prices mentioned, and nearly every farmer can make the line for himself a good deal longer than it has been, in the way just suggested.

At the factories and creameries the men whose special work it is to handle milk and manufacture cheese and butter need to keep on improving the quality of the goods turned out. As compared with the same industry in other and competing countries, our cheese-makers cannot afford to weaken effort at further improvement by too much confidence and boasting. The need now is to have *all the cheese from the Province as fine as the "make" of the best factories.* Systematic supervision and instruction would much facilitate that work.

In butter-making our creamery men have made some advances during the past few years. It is needed that the quality of the butter from the best creameries be better in 1887 than during 1886, and that the "make" from the creameries of the whole Province be as nearly uniform as possible. Judicious superintendence and practical instruction at the creameries during their working season would further that end. All of which is respectfully submitted by

Your obedient servant,

JAS. W. ROBERTSON.

(No. 57).

Return shewing the amount due the Government by settlers in the Muskoka and Parry Sound Districts for seed grain; also, what amount has been paid back to the Government by the settlers for seed grain. (*Not printed*).

RETURN

To an Order of the House giving copies of correspondence between the Government and Messieurs Gordon and Helliwell, respecting plans, etc., of the new Parliament Buildings, subsequent to that brought down in the Session of 1882, and being Sessional Paper No. 40 of that Session.

By Command.

ARTHUR S. HARDY,
Secretary.

Provincial Secretary's Office,
15th April, 1887.

(*Mr. Fraser.*)

Department of Public Works, Ontario,
Toronto, April 4th, 1887.

Copy of Correspondence between Messrs. Gordon and Helliwell and the Department of Public Works respecting the new Parliament Building Plans, subsequent to return to the House in February, 1882. (*Sessional Paper No. 40.*)

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RETURN.

TORONTO, March 23rd, 1882.

HON. COMMISSIONER OF PUBLIC WORKS,
Ontario.

DEAR SIR,—As the Government have decided not to proceed with the erection of the new Parliament Buildings, we think it well to submit to you some suggestions as to what we reasonably expect as remuneration for our services in connection with the same.

The three conditions imposed upon us have been faithfully adhered to by us. We designed a building which embraced all the accommodation demanded under the amended arrangement; you were kind enough to express yourself pleased with its appearance and the cost, as shewn by the tenders, bears out exactly our estimates, for during the nine months that our drawings were lying at the department the cost of building advanced fully 15 per cent.

In order to furnish you with complete plans and specifications in the time you allowed us, we had to work day and night for several months, employing all our office staff, together with additional help engaged specially for the purpose; also we were under the necessity of letting our usual current business suffer; all of which represents considerable pecuniary expense and loss.

The reasons for the non-erection of the building cannot in the slightest degree be attributable to us, and in such circumstances, where there is no special agreement to the contrary, the usual charge is $2\frac{1}{2}$ per cent.

So we trust you will favorably consider all the circumstances, and remunerate us with a sum equal to at least $1\frac{1}{4}$ per cent. if not more.

We have the honor to be,
Your obedient servants,

GORDON & HELLIWELL.

TORONTO, March 25th, 1885.

HON. C. F. FRASER,
Commissioner of Public Works.

DEAR SIR,—I am anxious that you should favor me with an interview *re* Parliament Building Plans.

I would like to place before you some matters consequent upon the altered aspect of the question since I furnished the drawings that you obtained tenders upon. Also, respecting the increased grant and the possibility of a new set of plans on the basis of same.

Will you kindly let me know at what time it would be convenient to you for me to call, or in the event of your time being engaged fully at present, whether in the meantime I will submit my suggestions in writing.

I have the honour to be,
Your obedient servant,

H. B. GORDON.

TORONTO, February 12th, 1886.

HON. C. F. FRASER,
City.

DEAR SIR,—As rumour is very busy just now connecting the name of Mr. Waite with the new Parliament Buildings, permit me to suggest a method by which the advantages of that gentleman's skill and experience may be secured to the Government without incurring the great odium of employing an alien to the exclusion of local men and supporters of the party, viz., employing myself as constructional and resident architect, and Mr. Waite as consulting architect. I could then speedily prepare a new set of plans and specifications subject to Mr. Waite's suggestions, and the construction could be carried on under my constant and Mr. Waite's occasional supervision. Of course, I would much prefer to have the matter wholly in my own hands; and I think in view of past circumstances and services I am entitled to it; but if you specially desire to have Mr. Waite connected with the matter, I see no practical difficulty to the carrying out of the proposed suggestion.

I have the honour to be,
Yours respectfully,

H. B. GORDON.

TORONTO, March 26th, 1886.

HON. COMMISSIONER OF PUBLIC WORKS
for Ontario

DEAR SIR,—We have had brought to our notice the fact that a statement was made by yourself in the Ontario Legislature, in connection with the plans for the new Parliament Buildings, which reflects in a very adverse way upon our professional reputation.

We therefore feel that we are justified in asking you to furnish us with a copy of the report of the person you employed to act as expert in order that we may know the points or reasons which justify the statement: "That there were such grave defects in heating, lighting, and ventilation, etc."

We have the honour to be,
Yours, etc.,

GORDON & HELLIWELL.

TORONTO, 10th Nov., 1886.

To the HON. COMMISSIONER OF PUBLIC WORKS
for Ontario.

DEAR SIR.—Now that the question about the new Parliament Buildings has been settled, we think that it is time we were re-imbursed for the expenditure of money, time, and skill which we made in furnishing the Government with the set of plans you requested us to make.

We have been asked by you not to press the matter heretofore, but now we see no reason why a settlement should not be effected.

Yours respectfully,

GORDON & HELLIWELL.

DEPARTMENT OF PUBLIC WORKS, ONTARIO.
TORONTO, November 17th, 1886.

GENTLEMEN,—I am directed to acknowledge the receipt of your letter of the 10th inst., and to say, in reply, that the Commissioner had hoped during the next week or the week after to come to a settlement of your claim in respect of Parliament Building, plans, etc. Urgent pressure of other matters may necessitate a little further delay; but the Commissioner is personally anxious to have the matter disposed of, and will at the earliest practicable moment fix a day for seeing you in respect to it.

Yours truly,

WM. EDWARDS,
Secretary.

Messrs. GORDON & HELLIWELL,
Architects, etc., Toronto.

TORONTO, January 24th, 1887.

Hon. C. F. FRASER,
Commissioner of Public Works for Ontario.

DEAR SIR,—About two months ago we received a communication from your Departmental Secretary stating that in a few weeks our claim for payment for Parliament Building plans would be adjusted and settled.

It is now over three years since we spent about $1,000, besides our own time, on these plans, and we think you should pay us without further delay.

We gave our close and earnest attention to the plans, both day and night, for six months in order to have them done to meet your demand, and now we think you should at least pay us handsomely, as it was through no fault of ours we were not permitted to put them in execution.

Yours respectfully,

GORDON & HELLIWELL.

DEPARTMENT OF PUBLIC WORKS, ONTARIO,
TORONTO, January 25th, 1887.

GENTLEMEN,—I am directed by the Honourable the Commissioner to acknowledge the receipt of your letter of yesterday's date, *re* plans for New Parliament Buildings, and in reply, to say that the Commissioner will be glad to meet you here to-morrow (Wednesday), the 26th instant, at 3.30 o'clock p.m.

Yours truly,

WM. EDWARDS,
Secretary.

Messrs. GORDON & HELLIWELL,
Architects, etc.,
26 King Street, E., City.

TORONTO, February 14th, 1887.

Hon. OLIVER MOWAT,
City.

DEAR SIR,—I beg respectfully to remind you of your promise made on the 18th of December, that within two months from that date we should be paid for our Parliament Building plans.

The period is now very nearly expired, and we trust you will see that we are paid within the next four days, and thus redeem your pledged word.

I am yours respectfully,

H. B. GORDON.

TORONTO, March 4th, 1887.

To the Honourable
THE COMMISSIONER OF PUBLIC WORKS FOR ONTARIO.

SIR,—Referring to our conversation, held about a month ago, respecting payment for Parliament Building plans, I beg respectfully to remind you of your parting statement, that within two weeks you would give me another interview with the object of arriving at a final settlement. I left you with the full understanding that I should have a further opportunity of stating my view of the case before any final decision was rendered by yourself.

Since then, at the request of the Attorney-General, I had an informal interview with the Deputy Attorney-General. While he mentioned the sum of $4,000 as a possible basis of settlement, he professed no knowledge of the facts of the case, or of the reasons which weighed with those that suggested it.

I feel sure that the full facts of the case have not been considered, and I beg to submit, for your consideration, the following reasons why a proper professional remuneration should be paid to my firm.

1st. In employing us to prepare plans and specifications for so important a building, you recognized that we must possess sufficient professional ability to entitle us to first-class professional remuneration for our services.

2nd. In submitting our plans to tender, after a close and critical examination of their contents, you recognized their suitability for the purpose, and incidentally our claim to proper professional remuneration.

3rd. Your repeated statements since then, that either ourselves or Messrs. Darling & Curry would be employed to construct the building, were added endorsations of our professional ability, and, consequently, of our claim to proper remuneration.

4th. Your having failed to produce any document from the interested expert or from any professional person capable of judging, that in any way reflects adversely upon the quality of our services, and your half acknowledgment that no such document exists, is a further endorsation of our claim to proper professional remuneration.

5th. That the honorable conduct of the Government in the first competition, together with your own constant assurances of liberal treatment, have caused us to expect from you at the time our services were rendered a proper professional remuneration.

6th. That the increased appropriation, the desire for more elaborate and costly buildings, and all the other reasons which weighed with the Government in inducing them to give the work to another, were matters which in no wise concern the value of the services we have rendered.

7th. Finally, the serious reflection upon our professional reputation, caused by the remarkable action of the Government and also by your own statements on the floor of the House, entitle us to the most generous treatment in the settlement of our claim.

The usual charge for the services rendered by us is two and-a-half per cent., which on the tendered price, together with interest for three and a-half years, amounts to over $16,000. Now, one-fourth of that sum has been suggested to us as a basis for a fair (?) settlement.

When three years ago the matter of building was apparently dropped for a time, I asked for at least $6,250, on the understanding that when the project was revived I should be again considered.

Such an offer never contemplated the unparalleled treatment of having our plans put to one side at the instance of an interested expert in order that he might be appointed.

In our usual business entailing only *ordinary* thought and study, my partner and I are in receipt of over $10,000 a year clear of expenses. The amount of service rendered the Government equalled nine months constant attention, which at the rate we receive for ordinary work should return us $7,500, besides from $1,000 to $1,500 for expenses. But when you consider that the Parliament Building plans entailed much severe study and a higher grade of service the sum of $13,675 and interest does not seem more than fair.

In our last interview a very modest sum was mentioned and in view of the treatment I have received, the least the Government can do is to pay promptly and fully.

I have the honour to be,

Your obedient servant,

H. B. GORDON.

Department of Public Works, Ontario,

Toronto, 7th March, 1887.

Sir,—I am directed by the Honourable the Commissioner of Public Works, to acknowledge the receipt of your letter of the 4th inst., on the subject of your claim for compensation in respect of plans, etc., prepared by your firm in the year 1881 for the then proposed new Provincial Buildings.

I am instructed to say in reply,—

(1) That the Departmental letter to your firm of 10th December, 1880, stated specifically that in the event of the (your) proposed new drawings being, in the opinion of

the Commissioner, such as could be adopted for the proposed new buildings, your firm were to receive such remuneration in respect thereof as in the opinion of the Commissioner might be just: but that otherwise you were not to be entitled to any remuneration whatever, and that the Commissioner's decision in the premises was to be accepted by your firm as final.

(2) That your reply to the foregoing letter was an acceptance of its terms without qualification.

(3) That subsequently by my letter of 25th March, 1881, it was further stipulated, and you agreed that it was to be in the discretion of the Commissioner, not to ask for tenders based upon your specifications, etc., that in such event your recompense therefor was to be such only as the Commissioner might fix and determine upon; that if on tenders being asked for, an actual contract was *bona fide* entered into for the construction of the buildings upon your plans and specifications, your fees would be such as might be mutually agreed upon; that failing any such contract your compensation in respect of such plans and specifications, and all work and services in connection therewith, would be such only as the Commissioner should, having due regard to the circumstances, deem to be right; and that the entering into any such contract was to be understood as not depending upon the nature or amount of any tenders received, but to rest entirely in the discretion and judgment of the Commissioner.

(4) That subject to the foregoing, tenders were advertised for in January, 1882; that the lowest tender received was in excess of the amount then appropriated by the Legislature for the erection and completion of these buildings; that no tender was accepted and no contract entered into.

(5) That consequently, under the terms of the letters above quoted, your firm was not then, and has never since been, entitled to ask or insist that the Government should call for further tenders or take any further or other action based upon your plans or should thereafter adopt them in connection with the erection of the buildings.

(6) That the sole right your firm then had, was (as per terms of Departmental letter of 25th March, 1881,) to have such compensation in respect of your plans and specifications and all work and services in connection therewith, as the Commissioner should, having due regard to the circumstances, deem to be right.

(7) That your firm then so understood this matter is evidenced by your letter of 23rd March, 1882, in which you say, "as the Government have decided not to proceed with the erection of the new Parliament Buildings, we think it well to submit to you some suggestion as to what we reasonably expect as remuneration for our services in connection with the same," and the amount of $1\frac{1}{4}$ per cent. which you then suggested was not (as your letter of 4th inst., now states), "on the understanding that when the project was revived you should be again considered," and your letter of March 1882, does not even hint at any hope or expectation of your being again so considered.

(8) That in submitting your plans to tender their absolute suitability for the purposes of the new buildings was not recognized as your letter suggests, because had the tenders received been within the amount of the appropriation, an expert's examination of the two sets of plans upon which tenders had been asked would then have been entered upon before the Commissioner would have decided any question relating to the letting of a contract, etc.

(9) That, when in 1885 an increased appropriation for the erection of these buildings was granted by the Legislature, there was nothing in the agreement upon which your firm had originally prepared plans, etc., to entitle you to demand that your plans should be further considered or dealt with; new plans might then have been received in any way which the Government deemed best; and that under the changed circumstances, and after such a lapse of time, steps were taken to secure expert examination of your plans, so as to determine whether or not they could be adopted, in no wise either prejudiced your firm, altered your position, or changed the character or amount of the compensation to which you might be entitled. All right to demand or require action upon your plans ceased early in the year 1882.

(10) That, your statement that the gentleman who made the expert examination of your plans was, or could have been, in any manner "interested," is wholly without foundation, and is an unfair and groundless reflection upon the action of the Government in the premises.

(11) That, if your firm desire the publication of a report by the expert upon the alleged defects in your plans, the Commissioner will take the necessary steps for its being produced to the Legislature, and published in the usual way; but this will not be done unless at your instance.

(12) That, whether or not in your usual business your partner and yourself are (as you state) now in receipt of over $10,000 a year, can have no bearing upon the question in dispute; what would seem to be more pertinent, would be the amount received in the year 1881, when the work on your plans, etc., was done.

(13) That, your statement that "the amount of service rendered the Government equalled nine months' constant attention," is not consistent with your previous verbal statements to the Commissioner that it equalled "about six months' constant attention, etc." In your interview with the Commissioner you mentioned the amount of your firm's expenses in connection with the preparation of plans, etc., as being about $1,000, whereas you now state it to have been "from $1,000 to $1,500." I am further directed to say that your interview with the Deputy Attorney-General was, because of your letter to the Attorney General whilst the Commissioner was absent from the city, and in which you pressed for your claim having immediate attention, and did not suggest that you wished for, or expected, another interview with the Commissioner. If, however, you desired to again discuss with the Commissioner any matters affecting the question of your firm's claim, he will, on hearing from you, arrange for an interview.

I have the honour to be, Sir,
Your obedient servant,

WM. EDWARDS,
Secretary Public Works.

H. B. Gordon, Esq.,
Architects, etc.,
(Messrs. Gordon & Helliwell),
26 King Street East, City.

Toronto, March 14th, 1887.

To the Secretary of Public Works
for Ontario.

Sir,—I have the honour to acknowledge the receipt of your favor of the 7th inst., replying to mine of the 4th, to the Hon. the Commissioner of Public Works. The contents of your letter have been noted, and while I must beg to disagree with some of your conclusions, I do not think there is any use in answering them as my object has been accomplished, viz.: placing before the Hon. the Commissioner of Public Works, some matters which I think he should consider in the settlement of our claim. The purpose of my letter was not to legally define my claim but simply to appeal in equity to the Commissioner to pay in proportion to the service rendered after taking all the matters into his consideration.

As probably a settlement might be reached through another interview with the Commissioner, I shall be much obliged if you will let me know when he will be at leisure to attend to this matter.

I have the honour to be,
Your obedient servant,

H. B. GORDON.

TORONTO, March 30th, 1887.

TO THE HON. THE COMMISSIONER OF PUBLIC WORKS
for Ontario.

SIR,—Having reference to our conversation of yesterday, and your offer then made to pay my firm at once the sum of five thousand dollars in full of all our claims *re* Parliament Building Plans, I have to reply: that while I am still of the opinion that such a sum is inadequate remuneration for the services we rendered; yet in view of the years that we have been kept waiting before any offer of payment was made, and of the possibility of further delay if we now refuse your offer, we agree to take the sum of five thousand dollars in full of our claim against the Government, provided it is paid at once and our plans returned to us.

Your answer confirming this offer and acceptance will oblige.

I have the honour to be,
Your obedient servant,

H. B. GORDON,
For GORDON & HELLIWELL.

COPY of an Order in Council approved by His Honour the Lieutenant-Governor, the 31st day of March, A.D. 1887.

Upon the recommendation of the Honourable the Commissioner of Public Works, the Committee of Council advise that the sum of five thousand dollars be paid to Messrs. Gordon & Helliwell as compensation for services rendered in connection with the preparation of plans, details and specifications for the proposed Parliament and Departmental buildings for the Province of Ontario, and that said sum be paid to them on the execution by them of a general release of all their claims in respect of said services, and that on the execution and delivery of such release a warrant for said sum do issue accordingly.

Certified.

E. F. B. JOHNSTON,
Clerk Executive Council, Ontario.

WM. EDWARDS, Esq.,
Secretary Public Works.

(Copy).

KNOW ALL MEN BY THESE PRESENTS, That we, Henry B. Gordon, of the City of Toronto, and Grant Helliwell, of the same place, carrying on business as architects, under the firm name of Gordon & Helliwell, do hereby acknowledge the receipt of $5,000 of lawful money of Canada, now paid to us by the Honourable the Provincial Treasurer of Ontario, on behalf of Her Majesty the Queen, and in consideration of such payment, we do and each of us doth release, acquit and discharge Her Majesty the Queen and her successors the Province of Ontario, and the Honourable the Commissioner of Public Works, his successors in office, and every of them, of and from all debts, sum and sums

of money, accounts, reckonings, actions, suits and causes of action, claims and demands whatsoever, which we or either of us may or can now have, or might, or could have against Her Majesty or the said Province, or the Honourable the Commissioner of Public Works, or any of them, of and concerning any matter, cause or thing whatsoever between our said firm, or either of us, and Her Majesty, or the said Province, or the Honourable the Commissioner of Public Works, in respect of all work, materials, time and professional skill expended and furnished by us, or either of us, in the preparation of plans, details and specifications for the proposed Parliamentary and Departmental Buildings for the Province of Ontario, and in respect of all and every matter and thing in any way connected therewith or incidental thereto.

In witness whereof, we have hereunto set our hands and seals, at Toronto, this 31st day of March, 1887.

Signed, sealed and delivered in the presence of

WM. EDWARDS,
Sec'y Dep't Public Works.

GORDON & HELLIWELL. [Seal].
H. B. GORDON. [Seal].
GRANT HELLIWELL. [Seal].

ANNUAL REPORT

OF THE

INSPECTOR OF DIVISION COURTS

FOR THE

PROVINCE OF ONTARIO,

FOR THE YEAR

1886.

Printed by Order of the Legislative Assembly.

Toronto:
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1887.

ANNUAL REPORT

OF THE

INSPECTOR OF DIVISION COURTS

FOR THE

PROVINCE OF ONTARIO,

FOR THE YEAR 1886.

OFFICE OF THE INSPECTOR OF DIVISION COURTS,
PARLIAMENT BUILDINGS, TORONTO, December 31st, 1886.

To the Honourable JOHN BEVERLEY ROBINSON,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit the following report upon the Division Courts, for the year 1886 :—

With the Annual Report of last year, copies of the Division Courts' Amendment Act of 1886 were supplied to all Clerks and Bailiffs for their information. Copies of the Annual Report and Amended Act were also sent to a number of large manufacturers, who desired to be furnished with the same, as a guide to them as suitors.

RECENT LEGISLATION.

As far as can be judged, from the comparatively short time that has elapsed since the amendments became law, the changes made appear to be working beneficially.

The change which has been made in the manner of altering the number and limits of Divisions—and the substitution of a Division Court Board, composed of the County Judge, the Sheriff, the Warden of the County, and the Inspector—for the Justices of the Peace for each County in General Sessions, has been taken advantage of in several counties and seems to work satisfactorily in the public interest. This alteration in the law puts an end to the unseemly struggles of interested parties, and more especially between magistrates at sessions, to reduce or increase the area of Division Courts, or to

establish new divisions, which in years past too frequently took place, and when the limits of divisions were in many cases settled, not on questions of right, but by force of numbers, by the active canvassing of magistrates by the contending parties.

I have attended several meetings of Boards during the past year, at all of which the desired changes were accomplished harmoniously, by sober judicial consideration of the merits of each case.

The other changes—of combining causes of action of a different character—the extension of the jurisdiction of the subpœna to witnesses, and the payment of witnesses' fees—of garnishee proceedings—the additional facilities for referring causes to arbitration —as to possession of property seized under attachment—the right to examine witnesses who cannot attend the trial, or who reside at inconvenient distances from the place of trial—the adding of defendants and other parties to a suit, and the assimilation of proceedings in Division Courts to those of the High Court of Justice, in regard to bringing actions for and against partnership firms, and the rights and liabilities of the several partners in such cases—are all received with acceptance, as far as my information extends.

Judgment Debtors.

Appended to last year's report, I supplied a return, shewing the number of judgment debtors who, during the twelve months, ending the 31st of December of the previous year, were ordered to be committed under each of the five heads mentioned under the 182nd section of the Division Courts' Act; also shewing the total of such orders to commit; the percentage of commitments under judgment summonses issued; the average percentage of orders to commit in each county, and the average percentage of committals of the number of orders to commit.

The total number of orders for the period indicated was 1,790, and the total commitments 98.

The average percentage of orders to commit of the number of judgment summonses issued was twenty-three and eight-tenths of one per cent.

The average percentage of committals, under the same number of judgment summonses issued, was only one and three-tenths of one per cent.

Careful enquiry has satisfied me that the relative proportions for 1885 would remain at about the same figures, and that there would be little variation of the figures for the period, from the date already given (31st December, 1884), to the present time.

From all the information which I am able to obtain upon this subject, I have to repeat the statement in last year's report, that more than eight-tenths of the orders to commit are made for causes that the debtor might have prevented, as where he has not attended as required by summons, or alleged sufficient cause for not doing so. And the conclusion is forced upon me that, as a rule, the operation of this portion of the Division Court law has been too hastily criticised, and upon very erroneous information as to the number of commitments actually made and of the causes therefor. Perhaps, in justice to the large number of judgment debtors who expose themselves to the severity of the law for non-attendance to answer the summons, it should be stated that they are largely of the class engaged in daily labour, and can but ill spare the time necessary to comply with

the requirements of the summons. This may be an evil inseparable from the examination of judgment debtors, but if any means could be devised whereby the debtor would be saved the loss of his bread-earning time, much good would be thereby accomplished.

Steps have been taken by me to obtain complete and accurate returns under this head for the years 1885 and 1866.

Complaints against Officers.

During the past year there was no diminution in the number of complaints against officers of the Courts. The complaints were of the usual character—for withholding suitors' moneys; neglecting to make returns within the time allowed by law for so doing; for not furnishing bills of costs in detail, when demanded by suitors, in pursuance of the Rules of Court; neglecting to furnish information asked for by suitors; illegally collecting fees; making overcharges for fees, etc., etc., etc. Prompt attention was given by this Department to every case; and where moneys were withheld, the result was in most cases an immediate settlement. In extreme cases of repeated offence, and continued persistent wrong-doing, the offending officials were, after due investigation, reported to the Government, and the proper remedy applied. All complaints and other correspondence are numbered and filed, and by a new plan, so arranged and indexed—whether against Clerks or Bailiffs, or relating to miscellaneous matters, leave of absence, sureties, etc., that their nature and description are brought into full view at a glance on turning to the reference of the particular court to which they relate.

Numerous letters come from suitors in acknowledgment of the services of the Department in their individual cases. The ready facilities which this Department affords for the redress of grievances are becoming more widely known and appreciated, and, for that reason, are much more resorted to than heretofore by all who have cause for complaint.

Magnitude of the Business.

The complaints, although numerous, still form on the whole a comparatively small percentage of the business brought before the Courts. This will be better understood when it is borne in mind that there were during the last three years one hundred and eighty thousand nine hundred and forty-three (180,943) suits entered, involving the large amount of six million six hundred and eighteen thousand four hundred and nine dollars ($6,618,409), or an average of more than sixty thousand (60,000) suits, and over two million two hundred thousand dollars ($2,200,000) for each year, besides transcripts of judgments and judgment summonses, which run up into the tens of thousands in number, and hundreds of thousands of dollars in amount. The Division Courts are giving satisfaction to the great bulk of the people in whose interest they were brought into existence, and amending legislation is adding periodically to their public value and efficiency.

New Courts and Changes.

New Courts have been established in the Nipissing District, in Rainy River District, in Thunder Bay District, and on St. Joseph's Island, Algoma, particulars of which, and also of the other changes and appointments made during the year, will be found under the proper head in the schedules annexed.

Bonds of Clerks and Bailiffs.

The Rule (No. 173) requiring the report of the Clerk as to the sureties of Clerks and Bailiffs at the sittings of the Courts, should be rigidly enforced. Clerks and Bailiffs have not been sufficiently attentive in notifying this Department of the death, insolvency, and other changes in their sureties. The frequent applications during the past year for the names of the sureties of officers of the Court, against whom complaints were made, brought this neglect of duty more particularly under my notice. I had forms printed and sent to the different Clerks, which they were required to fill out and return, shewing the name in full and place of residence of each Clerk and Bailiff, and his sureties; the places of residence of the latter, their calling, the amount in which each is held, the date of covenant, date of filing same, and other necessary particulars. This corrected information is now being accummulated, but all has not yet been received. A new registration book, with the proper rulings and headings, specially designed to give all necessary information respecting Clerks and Bailiffs and their sureties, and which will show at a glance any changes that may be from time to time made, has been prepared, and will be found a valuable reference in the records of the Department. Where there are some 650 officers of Courts, much office labour is entailed in the filling in and proper keeping of this register; the work, however, is one of prime necessity, and of the first importance, not only in the Department, but in the requirements of the public interests.

Annual Returns.

Considerable trouble is still experienced in getting in the complete annual returns within the time appointed—15th January—and much care is necessary in examining their accuracy—many returns having to be sent back for correction. There is, however, a marked improvement, and far greater carefulness than formerly is now observed. Some few officers delay their returns beyond the proper period, and have to be written to again and again on the subject. Their dilatoriness and neglect keep back the printing of the Annual Report, in the preparation of which, of course, all the reports are necessary to accuracy and completeness. The tabulated returns are annexed; also lists of Clerks and Bailiffs and their post-offie addresses; also the limits of divisions, and the schedule of Clerks' and Bailiffs' fees.

The Tariff.

The Tariff of Fees is now getting to be better understood; the practice as to charges and allowances in certain cases is becoming settled, and on the whole, the Tariff is giving general satisfaction.

Division Court Clerks' Association.

The body of Division Court Clerks have formed themselves into an organized association, which gives promise of usefulness to members. Through its means Clerks are likely to become better acquainted with their duties, and those residing at a distance from each other to enjoy the advantage of personal acquaintance, which will be of service in their official correspondence with each other.

INCREASING DUTIES.

The constantly growing Division Court business has added largely to the increasing duties of this Department. Outside inspection has become more frequent and extended, and investigations more numerous; the correspondence has increased immensely, and a multitude of enquiries for information take up much time and attention, and these duties will be further added to by future attendance on Division Court Boards. The increased work has rendered necessary the employment of additional clerical help in the Department.

I have the honour to be,

Your Honour's obedient servant,

J. DICKEY,
Inspector of Division Courts.

TABLES.

TABLE A.

RETURN of Division Court Business, from the First day of January to the Thirty-first day of December, A.D. 1886, inclusive, shewing:—

The Name of County, United Counties or District.		The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.		The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.		The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.		The total amount of Suitors' money paid out of Court, in each County, United Counties or District.		The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of action for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.		The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or District.		The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Provinces, in each County, United Counties or District.		The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Court (Costs) Act, 1880."	The amount of costs so taxed.	
				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
ALGOMA	1	1	43	2108	15	3	150	12	....	347	50	347	50	2	63	8	....	....	1	12	00	....	....	....	....	....	....	....	....
	2	2	138	5429	71	5	272	98	....	2752	25	2588	63	4	3	3	....	1	....	....	....	....	....	....	....	....	....	....	....
	3	3	24	1322	92	18	971	08	4	681	80	667	07	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	4	4	69	2402	37	12	691	28	2	1386	50	1435	86	4	2	....	....	....	1	12	00	31	77	1	1	39	1	10	00
	5	5	51	1343	39	7	437	21	3	943	46	894	58	2	....	....	....	....	....	....	....	1	94	....	....	....	....	....	....
	6	6	20	1043	92	5	292	99	8	529	88	508	06	....	1	....	....	....	1	12	00	1	39	....	....	....	....	....	....
BRANT	1	1	591	25497	18	37	1770	42	73	6016	85	5850	95	63	8	6	46	00	....	....	....	1	93	....	....	....	....	....	....
	2	2	102	2642	74	13	675	41	18	2012	94	2089	12	3	3	1	10	00	....	....	....	1	37	....	....	....	....	....	....
	3	3	23	870	79	7	353	38	2	540	95	523	12	2	....	1	11	00	....	....	....	....	....	....	....	....	....	....	....
	4	4	54	1456	50	7	437	21	3	943	46	894	58	2	....	1	12	00	....	....	....	....	....	....	....	....	....	....	....
	5	5	51	1343	39	5	292	99	8	529	88	508	06	....	1	1	12	00	....	....	....	....	....	....	....	....	....	....	....
	6	6	20	1043	92	9	531	10	1	425	01	362	85	3	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.	The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.	The total amount of Suitors' money paid out of Court, in each County, United Counties or District.	The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.	The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or District.	The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.
			$ c.		$ c.		$ c.	$ c.					$ c.		$ c.	$ c.	
ALGOMA	6	371	15229 85	57	2935 67	10	5724 44	5454 45	23		1	1	12 00		14 18		
BRANT	6	841	33851 52	78	4060 51	105	10469 09	10228 68	73	13	3	10	91 00		39 51	11 73	2 15 00
Carried forward.	12	1212	49084 37	135	6996 18	115	16193 53	15683 13	96	13	4	11	103 00		53 72	44 73	3 25 00

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
Bruce	1	11	280	9379	42	22	1133	95	53	4382	86	4428	06	16	60	4	26	00	1	10	76	1006	45	2	15	00
	2	2	279	8611	00	29	1627	56	52	3293	50	3134	11	18	2	2			1	9	22					
	3	3	130	5620	91	12	815	39	21	3309	23	3245	51	10	1					5	23					
	4	1	111	4408	41	8	336	51	18	2186	33	2071	99	14						5	66					
	5	5	116	4816	83	12	597	43	16	2412	97	2290	90	13	2					5	38					
	6	6	59	2410	27	5	262	20	3	1056	62	1073	64	8	1	1	11	00		3	58					
	7	7	120	6169	21	11	565	73	11	1541	85	1537	75	12						6	00					
	8	8	262	8220	80	20	1029	93	2	3391	13	3391	13	8						7	13					
	9	9	75	2660	81	9	559	04	5	863	79	863	79	4						2	11					
	10	10	65	1119	49	3	125	66	14	541	65	541	65							0	66					
Carleton	1	1	1645	73212	66	37	2109	70	485	18565	88	18271	07	199	2	1			1			1006	45	16	122	00
	2	2	59	2646	03	13	826	44	2	984	93	1025	71	8										1	6	00
	3	3	40	1807	11	4	91	39	7	638	91	618	96	2												
	4	4	40	1709	00	4	235	00	6	1225	35	1176	85	3												
	5	5	40	1248	82	6	576	63	1	545	41	545	41	3										1	6	00
	6	6	60	1812	10	5	59	94	1	479	94	447	32	2		1	3	12	00							
	7	7	62	1833	85	2	101	47	7	1298	24	1278	22													

RETURN of Division Court Business.—*Continued.*

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				c.			c.			c.			c.													
Brought forward	12	1212	48084	37	135	6996	18	115	16193	53	15683	13	96	13	4	11	103	00	2	52	72	41	73	3	25	00
BRUCE	10	197	55117	18	131	7053	40	195	22979	43	22578	53	103	66	3	7	57	00	2	55	73	.....		5	35	00
CARLETON	7	1906	82269	57	71	3060	57	509	23738	86	23363	54	217	3	2	3	12	00	1	91	16	1006	45	18	131	00
Carried forward	29	3315	185471	12	337	17050	15	819	62911	82	61625	20	416	84	9	21	172	00	3	203	61	1051	18	26	191	00

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.					$	c.			$	c.			$	c.			$	c.
Dufferin	1	1	217	9961	21	36	1147	27	19	2843	02	25	2843	02																
	2	2	270	11739	39	25	1031	27	36	3061	05	30	2873	49	2															
	3	3	132	5477	00	27	2010	00	16	2490	25	9	2127	82																
	4	4	61	2236	00	2	115	25	2	771	40	6	706	40																
	5	5	105	4514	91	14	519	79	....	2515	95	10	2515	95																
Elgin	1	1	342	13034	12	35	1522	81	59	6846	05	21	6867	07	3			1				1	12	00						
	2	2	77	2315	64	12	847	73	6	1235	85	1	1241	95	1			2												
	3	3	732	29652	20	36	2103	86	47	9978	86	76	9983	37	2			1				1	8	00						
	4	4	214	10758	24	41	2404	30	37	5900	00	26	5900	00	....			....				....	....							
Essex	1	1	78	2133	76	2	141	04	10	719	71	3	719	71				1	1	12	00									
	2	2	255	10144	50	13	765	34	21	4567	45	21	4826	32				2	....	....										
	3	3	94	2945	98	9	974	60	26	1996	84	4	1918	59	1			1	....	....										
	4	4	110	4424	92	5	143	31	7	1436	14	8	1452	10	1			....	....	....										
	5	5	185	7667	01	23	1626	63	58	4073	23	18	4015	91	....	2		1	....	....										
	6	6	184	4994	29	23	1334	76	46	3521	24	8	3596	41	....	....		....	....	....										
	7	7	297	11412	81	15	669	53	63	3507	81	17	3349	51	3	2		1	1	9	00									
	8	8	351	15049	40	22	808	13	52	5121	07	32	4999	18	3			2	1	12	00									

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.		The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.		The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.		The total amount of Suitors' money paid out of Court, in each County, United Counties or District.		The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.		The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.		The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.	
			$	c.		$	c.		$	c.		$	c.							$	c.			$	c.	
Brought forward.	29	4655	185771	12	337	17050	15	819	62911	82	61625	20	416	80	81	4	9	21	172	00	3	1	203	61	1051	18	191	00
DUFFERIN	5	785	33928	51	104	4823	58	73	11681	67	13366	68	80		4		2		23	00			37	09			37	50
ELGIN	4	1365	55760	20	124	6878	70	149	23960	76	23992	39	124		6	2	3		26	00	2		57	22	103	60	101	00
ESSEX	8	1554	58772	67	112	6463	34	283	24943	49	24877	73	111		11	9	4		33	00			58	31			68	00
Carried forward.	46	8359	334232	50	677	35215	77	1324	123497	74	121862	00	731		102	20	30		254	00	6		356	23	1154	78	400	50

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.		The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.		The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.		The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.		The total amount of Suitors' money paid out of Court, in each County, United Counties or District.		The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.		The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.		The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.		The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.	
				$	c.		$	c.		$	c.		$	c.						$	c.		$	c.			$	c.
FRONTENAC.....	1	526	25250	07	46	1372	81	45	8670	15	8112	65	53	5				1	10	00		26	15		47	36	3	14	00
	2	23	921	81	1	35	60		460	94	439	97	2	2					12	00		1	39						
	3	50	2017	65	1	40	33	4	1222	72	1182	39	5									2	06						
	4	271	9981	84	25	1006	32	41	3038	55	3061	80	23									11	15						
	5	65	1856	89	4	119	01	4	779	58	688	01	3									1	74						
GREY	1	394	18420	59	46	2976	68	98	4725	32	4725	32	39	3				1	10	00		19	19		24	50	5	25	00
	2	238	9216	01	25	1545	89	41	4386	78	4406	88	26	1		1						12	02				5	40	00
	3	464	20477	23	32	1744	33	42	6711	56	6765	30	41									21	34		28	14	5	45	00
	4	155	7010	69	26	1978	14	25	3804	73	3657	69	23	1		2		1	10	00		8	48				2	15	00
	5	306	12836	61	41	2388	78	38	5498	79	3669	27	29	2		1						12	98				3	25	00
	6	157	4212	79	15	495	96	37	1580	27	1358	85	7	4								4	57				3	15	00

RETURN of Division Court Business.—*Continued.*

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Brought forward.	46	8859	334232 50	677	35215 77	1324	123497 74	121862 00	731	102	.....	30	254 00	6	356 23	1154 78	52	400 50
FRONTENAC.....	5	935	40028 26	54	2578 07	94	14171 94	13484 82	86	7	.....	4	41 00	.....	42 49	47 36	3	14 00
GREY	6	1714	72173 92	185	11139 78	281	26707 45	24583 31	165	11	4	2	20 00	.....	78 58	52 64	23	165 00
Carried forward.	57	11008	446434 68	916	48933 62	1699	164377 13	159930 13	982	120	24	36	315 00	6	477 30	1254 78	78	579 50

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.				$	c.
Haldimand	1	1	91	2996	70	3	191	94	14	1167	59	1158	40		1															
	2	2	30	829	56	5	235	92	2	383	07	383	67		5															
	3	3	139	7185	37	15	510	80	17	2038	35	2091	72		14															
	4	4	17	774	87	1	17	93		218	00	218	00		1															
	5	5	19	566	25	7	280	35	2	398	66	356	66		2															
	6	6	123	2349	19	18	985	70	18	2567	47	2516	24		8		1													
Halliburton	1	1	65	2191	41	7	493	26	2	1305	46	1259	32			6				1	12	00	1	1	88					
	2	2	115	2730	62	7	393	07	1	1595	66	1593	39		3								2	2	07					
Halton	1	1	138	9946	97	13	691	16	17	2647	48	2717	92		39								1	12	42				13	00
	2	2	127	5831	76	13	45	49	11	3532	21	3473	22		18									7	26					
	3	3	128	3228	03	12	569	95	31	1677	66	1677	66		3				2	1	10	00		2	67					
	4	4	105	2508	40	11	525	13	13	1098	20	1073	34		2		1			1	12	00		1	75					
	5	5	12	514	66					397	38	352	94												33					
	6	6	29	1218	57	4	224	65	2	676	83	578	67		2									1	40					

RETURN of Division Court Business.—*Continued.*

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			$	c.		$	c.		$	c.		$	c.					$	c.		$	c.			$	c.
Brought forward.	57	11008	446434	68	916	48933	62	1699	164377	13	159930	13	982	35	24	1	36	315	00	6	477	30	1254	78	79	579	50
HALDIMAND	6	419	14701	94	49	2222	64	53	6773	14	6724	69	35	2	1		4	36	00		16	68			1	6	00
HALIBURTON	2	180	4922	03	14	886	33	3	2901	12	2852	71	3	6		1	2	12	00	3	3	95			2	13	00
HALTON	6	539	23248	39	53	2056	38	74	10029	76	9873	75	64	1	2	2	2	22	00	1	25	83					
Carried forward.	71	12146	489307	04	1032	54098	97	1829	184081	15	179381	28	1084	129	27	4	43	385	00	10	523	76	1254	78	81	598	50

RETURN of Division Court Business.—*Continued.*

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			$	c.		$	c.		$	c.	$	c.					$	c.							
HASTINGS.....	1	566	25991	57	12	448	43	44	4273	75	4288	27	64	2	4	.....	.....	1	.....	1	10	.....	.....	27	28	2	20	4	20	00
	2	50	1219	16	6	297	66	7	468	38	373	43	.....	.....	.....	.....	.....	.....	.....	.....	12	00	.....	1	28	.....	.....	.....	.....	.....
	3	75	3700	19	7	474	55	1	1320	43	1306	43	9	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	68	.....	.....	.....	.....	.....
	4	101	3125	93	9	466	46	12	1122	11	1075	48	5	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	81	.....	.....	.....	.....	.....
	5	264	9712	34	21	1049	43	15	3285	70	3095	30	19	1	1	1	9	00	.....	.....	.....	.....	.....	9	31	.....	.....	1	10	00
	6	313	10842	40	17	825	33	23	4604	57	4604	57	15	1	1	1	12	00	.....	.....	.....	.....	.....	9	98	.....	.....	2	10	00
	7	125	3214	67	22	677	41	15	1774	76	1752	87	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	18	.....	.....	.....	.....	.....
	8	190	5908	51	17	1258	79	52	885	81	885	81	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	67	.....	.....	.....	.....	.....
	9	242	8786	88	31	2558	56	19	2674	43	2594	06	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	47	.....	.....	1	5	00
	10	128	4555	15	22	918	56	12	1292	41	1292	41	6	.....	.....	16	.....	.....	.....	.....	.....	.....	.....	4	14	.....	.....	2	10	00
	11	64	1571	50	3	102	48	8	422	52	446	71	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	25	.....	.....	.....	.....	.....
	12	85	3082	58	7	390	66	5	1428	49	1460	80	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	50	.....	.....	1	5	00
HURON.....	1	116	5264	18	7	422	88	15	1620	83	1533	86	15	1	.....	.....	.....	.....	1	.....	10	.....	.....	5	88	.....	.....	.....	.....	.....
	2	338	9485	87	15	679	69	28	2859	62	2808	32	16	5	.....	1	.....	.....	1	.....	11	.....	.....	8	65	.....	.....	3	15	00
	3	213	10028	00	43	520	00	49	3060	00	3060	00	17	.....	1	2	.....	.....	.....	.....	.....	.....	.....	8	77	.....	.....	5	38	00
	4	218	9033	83	13	916	33	48	3099	90	2963	48	21	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	27	.....	.....	1	5	00

RETURN of Division Court Business.—*Continued.*

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			$ c.		$ c.		$ c.	$ c.							$ c.	$ c.		$ c.
Brought forward.	71	12316	189307 01	1032	51098 97	1829	184081 15	179881 28	1084	129	27	43	385 00	.....	523 76	1251 78	81	598 50
HASTINGS.....	12	2203	81710 88	174	8022 12	213	23562 36	23177 01	161	7	23	3	33 00	.....	79 55	2 20	11	60 60
HURON.....	4	885	33811 88	78	2539 40	140	10619 35	10365 66	69	7	5	2	21 00	.....	32 57	.....	9	58 60
Carried forward.	87	15234	604829 80	1284	61660 49	2182	218262 86	212923 98	1314	143	58	48	439	10	635 88	1256 98	101	716 70

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.		
HURON—*Con.*	5	109	5524	12	15	54	1243	69	165	13836	19	14196	60	82	7			3				33	99				
	6	56	2439	55	12	22	759	98	112	5546	09	5530	15	26	2			3	34	00		13	46				
	7	53	1980	35	5	18	728	65	84	4042	69	4042	69	8								5	75				
	8	221	7825	67	23	10	419	67	12	1892	27	1892	27	4				2	17	00		3	49				
	9	70	2729	23	15	14	605	20	37	3660	66	3560	21	21								10	11				
	10	56	2550	53	13	21	1208	40	42	2177	15	2127	15	14	1			1				6	41				
	11	101	3798	40	1	27	911	06	21	1947	40	1926	31	.8	1			1	11	00		4	99				
	12	113	4012	41	7		636	16	9	1557	99	1557	99	7													
KENT	1	797	34199	28		54	1243	69	165	13836	19	14196	60	82	7			3				33	99	105	00	7	35 00
	2	369	14264	27		22	759	98	112	5546	09	5530	15	26	2			3	34	00		13	46			12	83 00
	3	270	7021	11		18	728	65	84	4042	69	4042	69	8								5	75			1	5 00
	4	109	3826	03		10	419	67	12	1892	27	1892	27	4				2	17	00		3	49				
	5	263	9713	81		14	605	20	37	3660	66	3560	21	21								10	11			6	37 50
	6	166	6164	59		21	1208	40	42	2177	15	2127	15	14	1			1				6	41			1	7 00
	7	137	4711	08		27	911	06	21	1947	40	1926	31	.8	1			1	11	00		4	99				

RETURN of Division Court Business.—*Continued.*

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				c.			c.			c.			c.														
Brought forward.	87	15234	60829	80	1284	64660	49	2182	218262	86	21923	98	1314	70	143	1	53	48	7	439	00	83	00	10	1	635	88	35	12	1256	98	101	12	716	50	55	00
HURON.	12	779	30860	26	91	5847	93	46	16106	46	16159	90	70	1	1	1	4	6	62	00	8	00	1	1	78	20	3	75	105	00	27	2	167	50	9	00
KENT	7	2111	79900	17	166	5876	65	473	33102	45	33275	38	163	11	11	4	6	62	00	8	00	1	1	78	20	3	75	105	00	27	2	167	50	9	00
Carried forward.	106	18124	715590	23	1541	76385	07	2701	267471	77	262359	26	1547	155	61	61	61	581	40	11	749	20	1361	98	140	939	00									

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.							$	c.			$	c.			
LAMBTON.....	1	1	340	12581	15	31	1820	52	36	3455	97	3495	42	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	2	2	146	5314	73	14	681	12	15	1620	38	1648	14	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	3	3	106	4491	97	25	864	39	15	1896	10	1814	88	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	4	4	56	2161	91	11	70	41	1	1051	87	1042	00	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	5	5	173	6358	86	8	207	41	10	2394	32	2406	32	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	6	6	49	2349	44	5	292	18	4	977	11	977	11	7	.....	.....	.....	1	12	00	.....	.....	.....	.....	.....	.....	.....	.....	.....
	7	7	92	3042	22	9	813	50	1	1463	33	1437	06	3	.....	.....	.....	1	21	00	.....	.....	.....	.....	.....	.....	.....	.....	.....
	8	8	242	8126	30	45	1813	30	29	1287	50	4101	93	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	9	9	122	4172	38	14	464	95	3	2593	83	2506	98	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
LANARK.....	1	1	211	6127	33	9	363	84	29	2216	56	2109	55	10	1	.....	.....	.....	.....	.....	.....	5	86	.....	.....	.....	.....	.....	.....
	2	2	72	1687	96	3	331	54	2	668	05	614	13	.....	2	.....	.....	.....	.....	.....	.....	.....	90	.....	.....	.....	.....	10	00
	3	3	89	2736	77	11	712	63	11	1572	59	1572	59	2	.....	.....	.....	.....	.....	.....	.....	.....	06	.....	.....	.....	.....	19	00
	4	4	256	7088	25	4	76	00	45	2807	29	2757	00	4	1	.....	.....	.....	.....	.....	.....	3	97	.....	.....	.....	.....	8	00
	5	5	31	1268	20	4	272	54	.....	339	58	333	42	4	.....	.....	.....	.....	.....	.....	.....	1	45	.....	.....	.....	.....	.....	.....
	6	6	91	3086	24	3	84	37	10	709	12	709	12	8	.....	.....	.....	1	11	00	.....	4	06	.....	.....	.....	.....	.....	.....

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District. $ c.	The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District. $ c.	The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District. $ c.	The total amount of Suitors' money paid out of Court, in each County, United Counties or District. $ c.	The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District. $ c.	The number of Jury Trials by Jurors called, in pursuance of Sec. 192 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or District. $ c.	The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District. $ c.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed. $ c.
Brought forward.	106	18134	715360 23	1541	76385 07	2701	262359 26	1547	155			61	584 00	11	749 20	1361 98	139	939 00
LAMBTON.....	9	1326	48598 96	162	7027 78	114	19429 84	94	10	.....	.....	12	132 00	1	52 30	.....	10	65 00
LANARK.....	6	750	21994 05	34	1841 01	97	8005 81	28	4	.....	.....	1	11 00	.....	18 30	.....	9	37 00
Carried forward.	121	20200	785183 24	1737	85253 86	2912	289884 91	1669	169	61	74	727 00	12	819 80	1361 98	159	1041 00	

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
	LEEDS AND GRENVILLE	1	586	18319	64	7	153	65	102	7916	43	7679	63	23	1	....	....	2	21	00	....	....	....	....	14	96	36	00	3	15	00
		2	171	6371	40	9	518	50	21	2250	23	2103	20	15	....	2	....	1	....	....	....	....	....	....	6	30	....	....	....	....	....
		3	315	12530	16	12	454	50	18	3626	27	3417	59	28	....	....	....	....	....	....	....	....	....	....	13	83	....	....	2	10	00
		4	180	6806	02	5	232	61	26	2679	64	2677	64	14	1	....	1	1	11	00	....	....	....	....	7	18	....	....	4	23	00
		5	125	3051	21	3	42	16	21	2626	47	2626	47	2	1	....	....	....	....	....	....	....	....	....	2	56	....	....	3	14	00
		6	223	6685	16	....	....	....	7	3044	35	2969	88	9	1	....	....	....	....	....	....	....	....	....	6	39	....	....	....	....	....
		7	73	1967	38	2	66	38	6	757	77	736	27	3	....	....	....	....	....	....	....	....	....	....	1	71	....	....	1	5	00
		8	109	3571	99	4	32	72	2	1408	24	1408	24	12	....	....	....	....	....	....	....	....	....	....	5	19	....	....	2	15	00
		9	110	2543	43	....	....	....	2	2111	41	2003	67	2	....	....	1	....	....	....	....	....	....	....	1	85	....	....	....	....	....
		10	39	1188	66	....	....	....	3	501	05	504	05	2	....	....	....	....	....	....	....	....	....	....	1	10	....	....	....	....	....
		11	51	1571	71	3	319	51	1	816	11	791	11	1	....	....	....	....	....	....	....	....	....	....	1	03	....	....	1	10	00
		12	57	3067	59	2	70	29	....	578	31	561	96	8	....	....	....	1	....	....	....	....	....	....	2	90	....	....	....	....	....
	LENNOX AND ADDINGTON	1	537	17709	74	6	313	51	80	6874	02	6882	02	49	2	....	....	2	21	00	....	....	....	....	21	14	28	82	3	15	00
		2	93	4314	07	7	300	50	13	1216	80	1216	80	11	1	....	....	....	....	....	....	....	....	....	4	49	....	....	....	....	....
		3	17	683	91	....	....	....	1	396	96	396	96	3	....	....	....	....	....	....	....	....	....	....	....	96	....	....	2	20	00
		4	144	4758	61	2	23	23	41	2633	09	2624	08	7	....	....	1	2	12	00	....	....	....	....	4	59	....	....	1	5	00
		5	126	5404	56	5	201	55	7	2075	95	2054	42	10	....	....	....	2	24	00	....	....	....	....	6	79	....	....	1	2	00
		6	65	1904	54	1	46	80	4	697	93	678	18	3	....	....	....	....	....	....	....	....	....	....	1	53	....	....	1	4	00
		7	167	5278	20	7	412	85	4	984	59	1256	60	7	2	....	....	2	20	00	....	....	....	....	5	75	....	....	1	2	00

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.		The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.		The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.		The total amount of Suitors' money paid out of Court, in each County, United Counties or District.		The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.		The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.		The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.		The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of the "Division Courts Act, 1880."	The amount of costs so taxed.	
			$	c.		$	c.		$	c.		$	c.						$	c.		$	c.			$	c.
Brought forward,	121	20200	786183	24	1737	85253	86	2912	295525	37	288881	91	1669	169	61	3	74	727	00	819	80	361	98	159	1181	00
LEEDS AND GRENVILLE	12	2039	67674	35	47	1910	32	209	28319	28	27479	71	9	3	3		3	23	00	65	00	36	00	16	92	00
LENNOX AND ADDINGTON	7	1149	40053	63	28	1238	44	150	14939	34	15109	06	90	6			8	77	00	45	25	28	82	9	48	00
Carried forward,	140	23388	893911	22	1812	88462	62	3271	338783	99	332473	68	1878	184	64	6	85	827	00	929	05	426	80	184	1181	00

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.					$	c.		$	c.						
LINCOLN	1	1	69	1805	34	5	338	43	26	789	39	747	40	.....	31	1	6	.....	.....	.....	.....	.....	.....	.....	1	05	.....	.....	.....	.....	49	00
	2	2	344	13726	18	29	1246	43	58	4897	07	4749	37	31	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	51	.....	.....	.....	.....	18	00
	3	3	154	5803	59	10	612	03	12	2487	08	2451	43	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	30	.....	.....	.....	.....	6	00
	4	4	81	2876	66	13	879	52	4	1783	63	1758	92	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	91	.....	.....	.....	.....	.....	.....
MIDDLESEX	1	1	1663	66515	38	49	2738	86	173	21577	90	20687	88	117	.....	1	.....	.....	4	2	.....	47	00	.....	60	26	1224	85	13	86	00
	2	2	253	8687	34	16	494	25	4	2877	42	2795	74	18	.....	.....	.....	.....	2	.....	.....	21	00	.....	9	40	.....	.....	1	10	00
	3	3	93	4610	19	20	599	68	3	2852	41	2774	03	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	88	.....	.....	3	23	00
	4	4	73	3996	12	23	1324	65	1	1397	89	1356	53	10	.....	1	.....	.....	3	.....	.....	31	00	.....	5	65	.....	.....	.....	.....	.....	.....
	5	5	237	9365	58	37	1835	91	16	3086	33	2874	73	13	3	2	.....	.....	4	.....	.....	35	00	.....	10	26	.....	.....	3	27	00
	6	6	191	9685	74	37	2102	74	25	3072	25	3099	38	29	2	.....	.....	.....	3	.....	.....	35	00	.....	12	74	.....	.....	2	16	00
	7	7	125	3542	97	20	1022	97	15	1823	01	1876	03	6	1	.....	.....	.....	2	.....	.....	21	00	.....	4	15	.....	.....	.....	.....	.....	.....
	8	8	74	3221	74	6	216	88	5	1515	08	1784	17	11	1	.....	.....	.....	1	.....	.....	12	00	.....	4	48	.....	.....	.....	.....	.....	.....
	9	9	158	4299	23	2	119	98	22	1471	52	1430	05	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	19	.....	.....	.....	.....	12	00

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties, or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.	The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.	The total amount of Suitors' money paid out of Court, in each County, United Counties or District.	The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.	The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.	The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees; under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.
Brought forward.	140																	
	$ c.																	
	153	23388	893011 22	1812	88462 62	3271	332473 68	1878	52	184	7	64	85	827 00	65	929 05	1426 80	181 13 73 00
LINCOLN	4	648	24211 77	57	3096 41	100	9707 12	52		7						23 80		
	9	2867	107924 29	210	10455 92	264	38878 54	219	9	5	19	208 00		115 01	1224 85	22	174 00	
MIDDLESEX.....																		
Carried forward.	153	26903	1026047 28	2079	102014 95	3635	380859 34	2149	200	69	104	1035 00	65	1067 86	2651 65	219	1428 00	

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
Muskoka	1	153	5275	85	28	1518	35	5	2816	32	2778	97	6	1															
	2	125	4452	31	25	1228	32	16	1308	65	1237	82	2	5															
	3	112	4041	83	7	421	07	1	1134	48	1105	43	2																
	4	22	22	00	1	28	67	1	249	87	240	49																	
Nipissing	1	129	4173	24	2	74	25	2	1943	99	2079	33	1																
	2	236	11074	08	12	541	12	13	2704	91	2660	16	13	2	1														
	3																												
	4																												
Norfolk	1	349	11916	91	4	29	08	62	4083	80	3799	62	30	3															
	2	113	7407	48	16	696	93	39	2735	41	2563	72	13	2															
	3	91	2885	34	4	51	92	24	423	66	405	76	3	1															
	4	123	4625	42	21	1018	76	16	2043	44	1948	52	8																
	5	131	3436	64	10	405	51	35	1497	28	1497	28	4																
	6	156	6140	00	5	196	50	6	2020	95	1927	66	5			2	1		11	00	1	4	33	1	2	50			
	7	36	1185	27	19	636	00	10	921	08	792	12	1									1	00		5	00			
	8	31	839	81	5	287	72	2	409	84	409	84				1					1	0	42						

RETURN of Division Court Business.—*Continued.*

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			$	c.		$	c.		$	c.		$	c.						$	c.		$	c.		
Brought forward.	153	26903	1026047	28	2079	102014	95	3635	388414	97	380859	34	2149	10	200	6	.....	69	104	.....	1035	00	.....	65	1067	86	.....	.....	2651	65	219	1428	00
MUSKOKA	4	412	13791	99	61	3196	41	23	5509	32	5362	71	10	6	.....	.....	1	.....	.....	.....	.....		.....		.....		.....	.....	.....		2	10	00
NIPISSING	4	365	15247	32	14	615	37	15	4648	90	4739	49	14	2	8	3	2	2	.....	.....	.....		.....		.....		.....	.....	.....		4	13	00
NORFOLK	8	1030	38386	87	84	3322	42	194	14625	46	13844	52	64	8	216	73	106	68	1057	00	22	00	3	35	22	.....	.....	.....		2	7	50
Carried forward.	169	28710	1093473	46	2238	109149	15	3867	413208	65	404806	06	2237																2651	65	227	1458	50

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.		$	c.				$	c.
NORTHUMBERLAND AND DURHAM...	1	1	264	10669	38	20	1136	89	46	3203	81	3150	36	15	1	1	.....	.....	7	58	00	1	12	00	.....	.....	.....	.....	.....	.....
	2	2	153	6356	00	5	293	36	16	2412	82	2331	17	17	1	.....	1	.....	2	23	00	.....	.....	.....	.....	.....	.....	.....	.....	.....
	3	3	300	11220	00	18	1000	80	38	3215	64	3204	77	30	.....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	4	4	228	8754	83	16	888	74	59	2106	88	2045	76	17	1	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....	3	64	.....
	5	5	259	11936	47	15	671	48	68	3808	28	3635	38	27	1	1	.....	.....	1	10	00	3	12	66	.....	.....	.....	.....	.....	.....
	6	6	74	2841	41	5	218	53	8	1534	58	1521	00	5	1	1	.....	.....	1	11	00	1	3	16	.....	.....	.....	.....	.....	.....
	7	7	179	7261	24	7	556	91	32	1803	90	1713	69	15	1	.....	.....	.....	3	33	00	1	7	38	.....	.....	.....	.....	.....	.....
	8	8	420	16457	98	21	1671	30	99	3189	63	3189	63	33	2	.....	1	.....	.....	.....	.....	1	16	65	26	94	4	20	00	.....
	9	9	241	7477	35	10	462	30	32	4008	36	3930	53	11	.....	.....	1	.....	.....	.....	.....	.....	6	89	.....	.....	2	10	00	.....
	10	10	158	3874	78	16	549	07	50	1896	24	1866	24	5	1	.....	.....	.....	.....	.....	.....	.....	3	74	.....	.....	.....	.....	.....	.....
	11	11	205	8600	01	18	1366	04	9	3661	51	3465	73	16	.....	.....	.....	.....	.....	.....	.....	.....	8	83	.....	.....	2	10	00	.....
ONTARIO	1	1	301	13097	75	26	1204	97	19	2292	35	2292	35	21	.....	.....	.....	.....	1	12	00	.....	16	67	.....	.....	8	45	00	.....
	2	2	206	8851	04	14	1123	43	27	3302	93	3287	43	24	.....	2	.....	.....	.....	.....	.....	.....	9	60	.....	.....	.....	.....	.....	.....
	3	3	210	7528	46	13	590	12	40	2047	62	1945	78	10	1	4	.....	.....	.....	.....	.....	.....	6	49	.....	.....	3	15	00	.....
	4	4	425	18486	86	30	1552	02	75	5535	43	5426	28	29	.....	1	.....	.....	1	12	00	.....	15	52	.....	.....	1	5	00	.....
	5	5	142	4190	90	25	1265	73	23	2219	89	2200	00	10	.....	.....	.....	.....	.....	.....	.....	.....	4	57	.....	.....	1	5	00	.....
	6	6	133	5429	72	5	296	13	11	2078	36	1827	32	8	2	.....	.....	.....	.....	.....	.....	.....	5	15	.....	.....	3	21	00	.....
	7	7	57	1967	26	23	1760	77	15	1651	17	1640	00	1	1	.....	.....	.....	.....	.....	.....	.....	1	45	.....	.....	.....	.....	.....	.....

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The number of Transcripts of Judgments received from other Counts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Counts, in each County, United Counties or District.	The number of Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.	The total amount of Suitors' money paid out of Court, in each County, United Counties or District.	The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.	The number of Jury Trials by Juries called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to "Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.	The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.
					$ c.		$ c.	$ c.					$ c.		$ c.	$ c.	
Brought forward.	169	28710	1093473 46	2238	109149 15	3867	413208 65	404806 06	2237	216	73	106	1057 00	68	1103 08	2651 65	227
NORTHUMBERLAND AND DURHAM...	11	2481	95389 45	151	8815 42	457	30841 65	30114 26	191	9	4	13	135 00	7	97 25	26 94	26
ONTARIO	7	1474	59561 99	136	7798 17	210	19127 75	18619 16	103	8	5	2	24 00	.....	59 45	3 61	16
Carried forward.	187	32665	1248114 90	1525	125762 74	4534	463178 05	455539 48	2531	233	82	121	1216 00	75	1259 78	2682 23	269

The amount of costs so taxed.
$ c.
1458 50
135 00
91 00
1684 50

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
OXFORD	1	650	19502	30	22	1141	06	151	10518	92	10291	39	42	1					1	12	00							
	2	80	2325	78	14	627	58	12	1626	54	1626	98	3															
	3	126	3651	41	11	513	16	4	700	63	700	63	5															
	4	249	8214	06	20	542	93	53	3613	25	3581	46	20	2		1	10	00										
	5	560	20213	36	34	1538	03	77	7021	36	6990	96	33		1	6	76	00										
	6	281	9404	58	15	533	02	43	3951	73	3897	91	17		1													
PARRY SOUND	1	89	2651	97	23	1236	63	11	1025	39	1008	17	3						1	5	00							
	2	48	1920	48	11	395	70	4	849	22	849	22		1														
	3	10	439	13	1			1	65	30	68	30	1															
	4	187	9510	07	25	1225	75	5	2235	74	2066	67	12		1													
	5	55	2196	49	13	47	00	3	1003	50	936	16	4															
	6	44	1442	58	7	298	72	1	346	91	344	91	3															
PEEL	1	315	14119	55	20	1103	03	54	4528	20	4826	92	33						1	12	00			14	90		4	25	00
	2	120	3249	64	17	1322	38	20	1989	75	1843	52	1	2										2	38				
	3	83	4059	01	14	680	77	12	1167	21	1135	41	14											5	03		1	5	00
	4	132	5668	96	8	596	15	10	1520	15	1479	96	8	1					2	24	00			6	00				

RETURN of Division Court Business.—*Continued.*

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			$ c.		$ c.		$ c.	$ c.					$ c.		$ c.	$ c.	
Brought forward.	187	32665	1248414 90	1525	125762 74	4534	463178 05	455639 48	2551	233	82	121	1216 00	75	1259 78	2682 23	269	1684 50
OXFORD	6	1946	63311 49	116	4895 78	340	27432 43	27089 33	120	4	1	15	175 60	2	71 50	73 33	11	63 00
PARRY SOUND	6	433	18160 72	80	3203 80	25	5526 06	5273 43	23	1	1	....	.....	.....	.....	.....	1	5 00
PEEL	4	650	27097 16	59	3702 33	96	9205 31	9285 81	56	3	.....	3	36 00	.....	28 31	.....	5	30 00
Carried forward.	203	35694	1356984 27	1780	137564 65	4995	505341 85	495188 05	2730	241	84	139	1427 00	77	1359 59	2755 56	286	1782 50

RETURN of Division Court Business.—*Continued.*

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				$ c.		$ c.		$ c.	$ c.					$ c.		$ c.	$ c.		$ c.
PERTH	1	1	438	15092 65	23	819 42	65	6497 00	6294 64	30	.....	1	.....	8 00	.....	15 14	17 43	7	60 00
	2	2	250	9642 66	26	1072 48	30	5737 10	5628 31	22	.....	.....	.....	.....	.....	10 33	.....	1	5 00
	3	3	220	8033 54	14	525 76	30	3559 47	3545 27	18	1	.....	6	35 00	.....	11 28	.....	.....	.....
	4	4	45	1207 67	1	44 07	3	417 89	401 94	3	.....	.....	.....	.....	.....	1 29	.....	.....	.....
	5	5	94	3864 04	11	433 25	2	2539 20	2539 20	9	1	.....	.....	.....	.....	4 32	.....	.....	.....
	6	6	254	8089 46	16	850 25	53	3742 64	3731 60	15	.....	.....	.....	.....	.....	7 23	.....	1	5 00
PETERBOROUGH ..	1	1	564	20924 26	25	1385 43	29	5839 49	5839 49	33	3	.....	3	20 00	.....	20 55	9 60	.....	.....
	2	2	152	5276 34	12	752 33	9	1811 00	1736 56	6	2	.....	1	12 00	.....	5 18	.....	.....	.....
	3	3	10	257 67	.....	.....	.....	91 98	114 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	4	29	2374 00	358 16	5	1179 23	8	1179 23	403 90	.....	.....	1	.....	.....	.....	2 52	.....	.....	.....
	5	33	602 52	65 79	....	392 65	.....	.....	.....	.....	.....	.....	.....	.....	.....	33	.....	.....	.....

RETURN of Division Court Business.—*Continued.*

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			$	c.		$	c.		$	c.		$	c.						$	c.		$	c.			$	c.
Brought forward.	203	33634	1359384	27	1780	197564	65	4995	505341	85	495188	05	2730	241	81	139	1427	00	77	1359	59	2755	56	286	1782	50
PERTH	6	1301	48030	02	91	3745	23	183	22493	30	22143	99	97	2	1	7	43	00	.....	49	59	17	43	9	80	00
PETERBOROUGH ...	5	788	29434	79	45	2561	71	43	9314	35	9273	57	47	6	.....	4	32	00	.....	28	76	9	60	.....	.....	
Carried forward.	214	37783	1437449	08	1916	148871	59	5221	537149	50	526605	61	2874	249	85	150	1502	00	77	1437	94	2782	59	295	1862	50

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.							
PRESCOTT AND RUSSELL.....	1	105	358	3461	00	3	101	80	8	1563	22	1486	72	7										3	16			
	2	41	51	1421	82	1	33	80		579	77	579	77	4										2	10			
	3	97	19	2772	52	1	25	08		500	70	500	70	3		1				5	00			2	40			
	4	200	30	7320	21	8	471	22	21	2579	25	2546	92	13										6	79			
	5	54	48	1292	76	4	126	52	4	707	27	670	23	2										1	61			
	6	78	33	2306	16	2	39	71	4	843	67	872	79	3										2	04			
	7	38	136	1725	48	1	47	25	12	558	29	511	59	4										1	67			
	8	136	231	5074	58	5	213	99		2104	47	2071	26	9										4	68			
	9	231	25	7759	43	9	639	55	10	4064	21	3976	83	10		1								5	41			
	10	25	88	1053	41	2	109	58	1	492	66	492	66	2										1	01			
	11	88		3150	65	12	302	85	7	1420	95	1407	14	5										2	66			
PRINCE EDWARD..	1	358	10	13874	25	10	847	59	16	4341	16	4341	16	36										14	34	1	5	00
	2	51		2116	58				1	684	61	644	21	7		1								2	47			
	3	19	2	696	61		45	37	2	419	22	419	22	2											86			
	4	30	6	1215	63	2	26	00	2	1241	63	1241	63	1											85			
	5	48		1043	38				3	445	70	445	70	1											88			
	6	33		995	36					190	18	190	18	3										1	08			
	7	46	7	1946	08		198	80	2	431	91	431	91	3	1									1	62			
	8	18		598	21					194	29	161	97												39			

RETURN of Division Court Business.—*Continued.*

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Brought forward.	214	37783	1434449	08	1916	14371	59	5221	537149	50	526605	61	2874	249	85	150	1502	00	77	1437	94	2782	59	295	1862	50
PRESCOTT AND RUSSELL	11	1093	37338	02	48	2111	35	67	15114	46	15116	61	62	1	1	1	5	00	.....	33	56	.....		1	25	00
PRINCE EDWARD..	8	603	22586	13	25	1117	76	26	7948	70	7875	98	53	1	1	.....	.....		.....	22	49	.....		1	5	00
Carried forward.	233	39479	1494373	23	1989	14710	70	5314	560512	66	549598	20	2989	251	87	151	1507	00	77	1493	99	2782	59	300	1892	50

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
Rainy River	1	1	225	11915	30	3	108	96	6	2507	05	21	2507	05	4													
	2	2	5	2	00	....	....	....	3	11	33	2	11	33	4													
Renfrew	1	1	363	12898	79	15	1103	65	48	3452	39	24	3521	95	1		1								12	18	4	25	00
	2	2	59	2109	92	6	227	26	1	684	82	3	715	30	....	....	....	....	....	....	....	....	....	....	1	65	....	....	....
	3	3	139	5257	37	8	604	78	6	2527	99	....	2469	32	....	....	....	....	....	....	....	....	....	....	4	34	....	....	....
	4	4	146	5825	03	14	531	98	2	2422	19	10	2418	98	....	....	....	....	....	....	....	....	....	....	5	47	1	5	00
	5	5	59	1560	23	3	262	15	4	941	97	1	915	76	....	....	....	....	....	....	....	....	....	....	1	30	2	6	00
	6	6	96	3677	23	2	48	46	5	2137	64	5	2130	58	....	....	....	....	....	....	....	....	....	....	3	35	....	....	....
	7	7	81	2237	22	8	424	06	6	1174	91	1	1105	90	....	....	....	....	....	....	....	....	....	....	1	84	3	13	00
	8	8	25	866	60	4	455	98	4	827	13	2	803	61	1	....	....	....	....	....	....	....	....	....	....	92	....	....	....
Simcoe	1	1	377	16789	41	26	1681	33	84	5594	08	30	5279	44	1	....	1	....	....	....	....	....	....	....	13	92	51	3	20	00
	2	2	100	4442	15	16	184	46	27	1933	34	15	1913	39	....	....	1	....	....	....	....	....	....	....	6	53	....	....	....
	3	3	236	8730	66	15	1066	42	54	2991	05	22	2876	30	....	....	....	....	....	....	....	....	....	....	9	32	....	....	....
	4	4	301	13079	29	33	1936	48	27	4675	10	29	4562	17	....	....	....	....	....	....	....	....	....	....	14	64	1	5	00
	5	5	146	4940	95	16	912	47	56	1873	14	11	1863	22	2	....	....	....	....	....	....	....	....	....	6	52	....	....	....
	6	6	463	18355	87	29	1317	87	110	6208	64	34	6267	87	4	....	....	....	....	....	....	....	....	....	17	92	26	87	....
	7	7	123	4869	00	29	900	00	26	1009	80	10	1023	45	2	....	....	....	....	....	....	....	....	....	5	20	....	....	....
	8	8	364	3999	68	17	765	92	39	5379	76	28	5961	60	5	....	1	....	....	....	....	....	....	....	13	27	1	5	00
	9	9	247	11180	49	27	1500	80	42	2900	39	27	2907	83	1	....	....	....	....	3	28	00	....	....	15	96	2	10	00
	10	10	22	798	16	5	555	59	....	787	07	1	763	25	....	....	....	....	....	....	....	....	....	....	....	76	....	....	....

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The number of Transcripts of Judgments received from other Courts, in each County, united Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.	The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.	The total amount of Suitors' money paid out of Court, in each County, United Counties or District.	The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.	The number of Jury Trials by Jurors called, in pursuance of Sec. 152 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.	The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or Districts.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.
			$ c.		$ c.		$ c.	$ c.					$ c.		$ c.	$ c.	
Brought forward.	233	39479	1494373 23	1989	147100 70	5314	560512 66	549598 20	2089	251	87	151	1507 00	77	1493 99	2782 59	300	1892 50
RAINY RIVER.....	2	227	11917 30	3	108 96	9	2518 35	2518 35	23	8	.....	2	10 00	1	12 40	.....	4	30 00
RENFREW ..	8	968	34432 39	60	3658 32	76	14169 04	14081 41	46	2	1	.....	.....	.....	31 65	.....	10	49 00
SIMCOE.....	10	2379	87185 66	213	10821 34	465	33451 37	33418 52	207	16	2	4	38 00	.....	103 94	26 88	9	50 00
Carried forward.	253	43053	1627908 58	2265	161689 32	5864	610651 42	599616 48	3365	277	90	157	1555 99	78	1641 38	2809 47	323	2021 50

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.						$	c.		$	c.			$	c.
STORMONT, DUNDAS AND GLENGARRY.	1	203	7	5205	72	7	281	34	15	3173	42	3032	19	3	1													
	2	192	8	4325	15	8	213	04	7	1619	92	1602	17	9	1													
	3	607	9	20176	31	9	359	10	90	5090	55	5066	77	63														
	4	168	8	5025	76	8	525	18	24	1844	38	1763	47	14														
	5	192	2	5516	49	2	98	93	2	1863	22	1858	08	4														
	6	87	12	2262	20	12	410	87	17	1579	56	1497	88	3		1												
	7	63	6	2272	68	6	241	47	3	1055	33	1048	68	5	1													
	8	151	5	4083	13	2	326	41	2	2413	06	2245	85	3	1													
	9	124		4187	22		1560	03	8	2234	55	2100	00	7														
	10	164		4928	29	4	182	97	4	2328	51	2309	11	6		1												
	11	126	3	3526	21	3	118	23	9	1348	57	1347	65	3														
	12	68	7	2149	82	7	325	79	1	1211	60	1211	60	3														
THUNDER BAY....	1	280	6	15745	15	6	296	52	14	3144	44	3112	85	34	1	2						1				1	5	00
	2																											
	3																											

RETURN of Division Court Business.—*Continued.*

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					$ c.		$ c.	$ c.					$ c.		$ c.	$ c.		$ c.
Brought forward.	253	43053	1627908 58	2265	161689 32	5864	610651 42	509616 48	3265	277	90	157	1555 00	78	1641 38	2869 47	323	2021 50
STORMONT, DUNDAS AND GLENGARRY.	12	2145	64156 98	71	4643 36	182	25762 66	25083 45	123	5	4	2	20 00	.....	69 69	42 50	10	53 00
THUNDER BAY	3	280	15745 15	6	296 52	14	3144 41	3112 85	31	1	2	.....	.....	1	.....	.....	1	5 00
Carried forward.	268	45478	1707810 71	2342	166629 20	6060	639568 52	627812 78	3422	283	96	159	1575 00	79	1711 07	2851 97	334	2079 50

RETURN of Division Court Business.—*Continued.*

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				$	c.		$	c.		$	c.		$	c.					$	c.			$	c.			$	c.
VICTORIA.....	1	1	94	3990	19	20	1302	37	21	1421	40	1164	90	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	2	2	130	4099	91	5	175	65	4	848	86	741	41	2	.....	1	.....	.....	.....	.....	.....	3	99	.....	.....	.....	.....	.....
	3	3	38	1646	53	10	502	04	2	657	30	681	62	3	.....	.....	.....	.....	.....	.....	.....	2	78	.....	.....	.....	5	00
	4	4	63	2559	44	4	103	30	3	796	21	796	21	11	.....	.....	.....	.....	.....	.....	.....	1	47	.....	.....	.....	.....	.....
	5	5	307	14446	88	16	820	61	24	3974	58	3863	07	32	.....	.....	3	20	00	.....	.....	3	65	.....	.....	.....	10	00
	6	6	56	2543	75	5	326	99	2	1219	90	1227	20	4	1	.....	.....	.....	.....	.....	.....	16	31	.....	.....	.....	5	00
	7	7	112	4616	58	17	515	93	16	1770	62	1770	62	2	3	1	1	15	00	3	.....	3	44	.....	.....	.....	.....	.....
																						3	41	.....	.....	.....	.....	.....
WATERLOO.....	1	1	385	14643	80	24	1083	27	14	5798	27	5701	04	34	3	.....	.....	.....	.....	.....	.....	15	88	.....	.....	.....	.....	.....
	2	2	118	5560	33	6	334	72	2	2242	21	2037	46	14	.....	.....	.....	.....	.....	.....	.....	6	05	.....	.....	.....	.....	.....
	3	3	299	8285	35	13	903	15	7	2170	75	2116	43	8	2	.....	.....	.....	.....	.....	.....	6	17	.....	.....	1	5	00
	4	4	90	4741	90	4	478	55	2	1802	71	1802	71	9	.....	.....	.....	.....	.....	.....	.....	4	32	.....	.....	.....	.....	.....
	5	5	108	3545	06	10	360	65	5	1832	34	1847	78	10	1	.....	.....	.....	.....	.....	.....	4	63	.....	.....	1	5	00
	6	6	78	4135	97	4	165	30	2	2009	74	2007	47	10	2	.....	.....	.....	.....	.....	.....	4	54	.....	.....	.....	.....	.....
	7	7	60	3018	37	6	395	15	3	1368	15	1368	15	10	.....	.....	.....	.....	.....	1	.....	3	79	.....	.....	1	7	00

RETURN of Division Court Business.—*Continued.*

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Brought forward.	268	4547	1707810	71	2342	166829	20	6060	639558	52	627812	78	3422	283	96	159	1575	00	79	1711	07	2851	97	334	2079	50
VICTORIA.....	7	800	33903	28	77	3746	89	72	10688	87	10245	03	63	5	1	4	35	00	3	35	05	.....		4	20	00
WATERLOO	7	1138	43930	78	67	3720	79	35	17224	17	16881	04	95	8	.....	.....	.....		1	45	38	.....		3	17	00
Carried forward.	282	4741	1785644	77	2486	174096	88	6167	667471	56	654938	85	3580	296	97	163	1610	00	83	1791	50	2851	97	341	2116	50

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.		The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.		The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.		The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.		The total amount of Suitors' money paid out of Court, in each County, United Counties or District.		The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Jurors summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.		The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or District.		The amount of Fees and Emoluments payable to the Honorable the Treasurer for the use of the Province, in each County, United Counties or District.		The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.	
				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
WELLAND	1	1	339	10479	40	19	1548	78	64	4676	00	4620	23	18	4	.....	.....	1	.....	.....	.....	1	10	04	.....	.....	.....	1	5	00
	2	2	51	916	34	10	487	47	11	536	47	536	47	1	1	.....	.....	.....	.....	.....	.....	.....	.....	70	.....	.....	.....	.....	.....	.....
	3	3	96	3732	53	10	286	81	10	1922	95	1868	53	7	8	.....	1	.....	.....	.....	.....	.....	4	17	.....	.....	.....	.....	.....	.....
	4	4	205	6669	20	13	205	65	26	2196	00	2137	93	10	.....	.....	.....	.....	.....	.....	.....	.....	6	01	.....	.....	.....	.....	5	00
	5	5	142	4274	45	14	743	96	21	2186	07	2196	07	8	2	.....	.....	.....	.....	.....	.....	.....	4	37	.....	.....	.....	.....	5	00
	6	6	90	2270	94	1	117	09	5	1122	05	1038	37	3	.....	.....	.....	.....	.....	.....	.....	.....	1	86	.....	.....	.....	.....	.....	.....
WELLINGTON	1	1	398	16315	76	12	608	97	19	5672	43	5439	68	35	.....	2	.....	.....	.....	.....	.....	.....	15	73	.....	.....	.....	3	17	50
	2	2	20	840	75	6	220	94	2	305	35	305	55	2	.....	.....	.....	.....	.....	.....	.....	.....	1	28	.....	.....	.....	.....	.....	.....
	3	3	46	1568	78	8	491	49	3	850	10	829	05	4	.....	.....	1	.....	.....	.....	.....	.....	2	38	.....	.....	.....	.....	.....	.....
	4	4	190	7705	53	11	741	20	13	2230	10	2230	41	20	.....	2	.....	.....	1	14	00	.....	8	66	.....	.....	.....	1	10	00
	5	5	107	3546	30	15	837	65	10	1328	00	1289	33	7	.....	1	.....	5	48	00	.....	.....	3	25	.....	.....	.....	.....	.....	.....
	6	6	102	4898	60	7	403	68	4	1311	90	1311	90	14	.....	.....	.....	.....	.....	.....	.....	.....	5	33	.....	.....	.....	3	28	00
	7	7	24	877	21	7	290	03	1	565	99	553	51	1	.....	.....	.....	.....	.....	.....	.....	.....	1	64	.....	.....	.....	.....	.....	.....
	8	8	266	9543	80	21	79	97	21	3674	75	3619	65	16	.....	.....	.....	.....	.....	.....	.....	.....	8	95	.....	.....	.....	.....	.....	.....
	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	10	10	168	6958	15	20	1229	80	22	2384	00	2538	62	17	2	.....	.....	.....	.....	.....	.....	.....	8	24	.....	.....	.....	1	5	00
	11	11	315	12132	56	15	956	69	31	4027	68	4021	21	23	1	.....	.....	.....	.....	.....	.....	.....	12	72	.....	.....	.....	3	20	00
	12	12	155	5614	63	14	602	01	12	2231	59	2112	55	16	.....	.....	1	2	24	00	.....	.....	8	12	.....	.....	.....	.....	.....	.....

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties, or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.	The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.	The total amount of Suitors' money paid out of Court, in each County, United Counties or District.	The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.	The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.	The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees: under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.		The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.		The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.		The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.		The total amount of Suitors' money paid out of Court, in each County, United Counties or District.		The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken on detainer, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.		The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or District.		The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.		The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.	
				$	c.		$	c.		$	c.		$	c.						$	c.			$	c.			$	c.
WENTWORTH	1	737	33626	48	39	1560	66	48	8659	74	8101	07	54	2					20	00			30	33		2	14	00
	2	182	4583	27	10	252	99	9	2154	22	2119	40	8						4	55			4	55				
	3	31	1593	57	9	581	99	2	1075	06	1075	06	5										2	00		2	11	00
	4	70	2384	47	11	747	37	3	1703	47	1723	75	7										3	07		1	10	00
	5	28	792	56	4	135	58				332	16	1										1	20				
	6	64	2322	70	6	309	35				1025	65	3						11	00			3	01				
	7	24	950	13	1	29	76	1	486	02	486	02	2						12	00			1	04				
	8	14	530	11				1	44	07	26	59	1											46				
	9	573	28012	91	13	672	30	35	5177	16	5015	67	49	5		3	2		28	00			21	53		1	6	00
	10	2472	104461	42	65	4396	62	574	33207	46	33183	31	222	3	6	9			57	00			61	90		1	6	00
YORK	1	2243	106972	13	95	4463	06	673	24185	95	23891	22	270	10		3	7		57	00			117	38		7	45	00
	2	248	9359	28	17	991	81	68	2726	88	2626	88	17			1	1		11	00			8	80		1	10	00
	3	109	4647	75	9	873	18	25	1889	24	1847	98	10				1		20	00			5	91				
	4	309	12607	72	29	1952	70	37	5479	26	6636	44	34				1		10	00		1	14	34		7	50	00
	5	98	5359	56	24	1308	63	9	2696	96	2610	13	18		1								6	42		4	20	00
	6	222	7503	84	8	256	36	22	2662	41	2511	08	19										8	80		2	10	00
	7	128	9771	50	7	259	38	23	3034	87	2990	77	43										13	12		2	10	00
	8	87	2645	04	6	239	13	15	1373	22	1373	22	3		1								2	73				
	9	34	1515	36	4	146	56	27	1820	51	1823	37	4		1				11	00								
	10	2472	104461	42	65	4396	62	574	33207	46	33183	31	222	3	6	9			57	00			107	55		1777	45	
																										8	42	00

RETURN of Division Court Business.—*Continued.*

THE NAME OF COUNTY, UNITED COUNTIES OR DISTRICT.	The number of Divisions, in each County, United Counties or District.	The number of Suits entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.	The amount of Claims entered, exclusive of Transcripts of Judgments and Judgment Summonses, in each County, United Counties or District.		The number of Transcripts of Judgments received from other Courts, in each County, United Counties or District.	The amount of Claims received by Transcripts of Judgments, from other Courts, in each County, United Counties or District.		The number of Judgment Summonses issued, in each County, United Counties or District.	The total amount of Suitors' money paid into Court, in each County, United Counties or District.		The total amount of Suitors' money paid out of Court, in each County, United Counties or District.		The number of Suits entered, where the amount claimed exceeds $100, in each County, United Counties or District.	The number of actions for Tort, where the amount claimed exceeds $40, in each County, United Counties or District.	The number of actions of Replevin, where the value of the goods or other property or effects distrained, taken or detained, exceeds the sum of $40, in each County, United Counties or District.	The number of Jury Trials by Juries summoned, in each County, United Counties or District.	The amount paid to Jurors summoned, in each County, United Counties or District.		The number of Jury Trials by Jurors called, in pursuance of Sec. 122 of "The Division Courts Act," in each County, United Counties or District.	The amount payable to Treasurer for "Division Court Jury Fund," in each County, United Counties or Districts.		The amount of Fees and Emoluments payable to the Honourable the Treasurer for the use of the Province, in each County, United Counties or District.	The number of instances in which the Judge has allowed costs to be taxed for Counsel, Attorney or Agents' Fees, under Sec. 16 of "The Division Courts Act, 1880."	The amount of costs so taxed.	
			$	c.		$	c.		$	c.		$	c.						$	c.		$	c.		$	c.
Brought forward.	300	50130	1889989	70	2889	183946	07	6432	704693	30	691587	91	3781	316	102	175	1724	00	85	1893	95	2851	97	355	2212	00
WENTWORTH	9	1723	69796	20	93	4290	00	99	20764	82	19905	37	130	7	5	8	71	00	7	70	19	175	14	6	41	00
YORK	10	5950	254743	60	264	4977	43	1473	79086	76	78904	40	640	15	11	20	166	00	1	285	14	3226	19	31	187	00
Grand Totals	319	57803	2008528	50	3046	193213	50	8004	804544	88	790487	68	4551	338	118	203	2222	91	93	2349	28	6253	30	392	2440	00
Grand Totals, 1885	311	60391	2207142	47	4163	219010	55	8048	797050	88	823061	09	4553	287	109	225	2085	00	66	2389	47	6485	19	418	2742	77
Grand Totals, 1884	310	61522	2211167	20	4132	199290	07	7517	793207	01	789540	71	4675	213	104	332	1708	27	46	2319	30	4881	23	384	2332	00
Grand Totals, 1883	309	52768	1993086	65	3717	170834	49	6515	716718	26	698274	15	3891	388	92	184	1708	27	51	2001	54	3887	58	344	2321	55
Grand Totals, 1882	308	47171	1713122	11	3223	145944	45	6311	642269	20	636631	59	3356	308	81	155	1462	00	49	1709	29	3124	63	.....	.....	.....

TABLE B.

List of all the Division Court Clerks, their Post Office Address, the County and Number of Division in which their Courts are situated, for the Province of Ontario, up to 31st December, 1886, inclusive.

County.	No. of Division.	Name of Clerk.	Post Office Address.
Algoma	1	E. Biggings	Sault Ste. Marie.
	2	T. Collins	Bruce Mines.
	3	S. McLean	Little Current.
	4	W. S. Francis	Manitowaning.
	5	James Fraser	Gore Bay.
	6	A. T. Rose	Marksville.
Brant	1	Joseph Robinson	Brantford.
	2	John K. Finlanson	Paris.
	3	J. P. Galloway	St. George.
	4	Hy. Cox	Burford.
	5	J. R. Malcolm	Scotland.
	6	Thomas F. Simpson	Onondaga.
Bruce	1	Wm. Collins	Walkerton.
	2	H. B. O'Connor	Teeswater.
	3	Joseph Barker	Kincardine.
	4	N. McKechnie	Paisley.
	5	James McKinnon	Port Elgin.
	6	Hugh Murray	Underwood.
	7	A. Neelands	Invermay.
	8	B. B. Miller	Wiarton.
	9	James McLeod	Ripley.
	10	W. Moshier	Lion's Head.
Carleton	1	J. R. Armstrong	Ottawa.
	2	H. Riley	Richmond.
	3	John Fenton	Huntley.
	4	W. P. Taylor	Fitzroy Harbour.
	5	Charles G. Lindsay	Kars.
	6	Ira Morgan	Metcalf.
	7	F. W. Harmer	Hintonburgh.
Dufferin	1	Guy Leslie	Orangeville.
	2	Alexander McLachlan	Shelburne.
	3	J. A. Love	Stanton.
	4	G. McManus	Mono Mills.
	5	R. E. Hamilton	Grand Valley.
Elgin	1	A. Love	Aylmer.
	2	Charles Askew	St. Thomas.
	3	Charles Askew	St. Thomas.
	4	F. McDiarmid	West Lorne.
Essex	1	James A. Stewart	Sandwich.
	2	J. H. C. Leggatt	Amherstburg.
	3	E. Allworth	Kingsville.
	4	C. Bell	Oxley.
	5	George A. Morse	Leamington.
	6	F. P. Boutellier	Belle River.
	7	John McCrea	Windsor.
	8	John Milne	Essex Centre.

List of all the Division Court Clerks, etc.—*Continued.*

County.	No. of Division.	Name of Clerk.	Post Office Address.
Frontenac	1	Wm. Robinson	Kingston.
	2	P. McKim	Kingston.
	3	C. Ruttan	Sydenham.
	4	A. Grant	Verona.
	5	D. J. Walker	Inverary.
	6	Jesse Shibley	Sharbot Lake.
Grey	1	John Stephens	Owen Sound.
	2	David Jackson, Jr.	Durham.
	3	Thomas Plunkett	Meaford.
	4	T. J. Rorke	Heathcote.
	5	J. W. Armstrong	Flesherton.
	6	John McDonald	Chatsworth.
Haldimand	1	D. McGregor	Caledonia.
	2	W. Mussen	Cayuga.
	3	T. Armour	Dunnville.
	4	R. A. Havill	Rainham.
	5	S. K. Smith	Canboro'.
	6	C. E. Bourne	Jarvis.
Haliburton	1	C. D. Curry	Minden.
	2	Wm. Prust	Haliburton.
Halton	1	Wm. Panton	Milton.
	2	R. Balmer	Oakville.
	3	Lachlan Grant	Georgetown.
	4	J. Matthews	Acton.
	5	S. R. Lister	Campbellville.
	6	Gilbert C. Bastedo	Burlington.
Hastings	1	R. D. C. Hulme	Belleville.
	2	D. R. Ketcheson	Wallbridge.
	3	A. B. Randall	Shannonville.
	4	T. McCann	Tweed.
	5	F. B. Parker	Stirling.
	6	J. S. Loomis	Madoc.
	7	A. S. Valleau	Deseronto.
	8	J. Sills	Canifton.
	9	J. Simmons	Trenton.
	10	D. Bentley	Marmora.
	11	James E. Harrison	Bridgewater.
	12	J. Wilson	L'Amable.
Huron	1	J. S. McDougall	Goderich.
	2	John Beattie	Seaforth.
	3	W. W. Farran	Clinton.
	4	A. Hunter	Brussels.
	5	T. Trivitt	Exeter.
	6	Wm. McArthur	Dungannon.
	7	John Morgan	Bayfield.
	8	James McGuire	Wingham.
	9	Joseph Cowan	Wroxeter.
	10	M. Zeller	Zurich.
	11	Wm. Lewis	Crediton.
	12	Myles Young	Blyth.

List of all the Division Court Clerks, etc.—*Continued.*

County.	No. of Division.	Name of Clerk.	Post Office Address.
Kent	1	W. B. Wells, junr	Chatham.
	2	J. Duck	Ridgetown.
	3	S. Wallace	Dresden.
	4	Michael Samson	Harwich.
	5	D. C. McDonald	Wallaceburg.
	6	George Moore	Bothwell.
	7	D. R. Farquharson	Fletcher.
Lambton	1	H. M. Pousett	Sarnia.
	2	Wm. McLay	Watford.
	3	W. Webster	Florence.
	4	P. Cattanach	Sombra.
	5	T. R. K. Scott	Forest.
	6	T. Kirkpatrick	Thedford.
	7	John McRae	Mooretown.
	8	W. G. Fraser	Petrolea.
	9	Richard Code	Alvinston.
Lanark	1	R. Jamieson	Perth.
	2	W. A. Field	Lanark.
	3	F. McEwen	Carleton Place.
	4	W. M. Keith	Smith's Falls.
	5	Alex. Graham	Pakenham.
	6	Wm. P. McEwen	Almonte.
Leeds and Grenville	1	D. B. Jones	Brockville.
	2	B. White	Prescott.
	3	S. McCammon	Gananoque.
	4	Oliver Bascom	Kemptville.
	5	E. H. Whitmarsh	Merrickville.
	6	W. H. Denaut	Delta.
	7	H. McCrea	Frankville.
	8	H. Kilborn	Newboro'.
	9	R. B. Alguire	Farmersville.
	10	G. Fairbairn	Spencerville.
	11	J B. Bellamy	North Augusta.
	12	M. J. Connolly	Caintown.
Lennox and Addington	1	Charles James	Napanee.
	2	C. L. Rogers	Bath.
	3	J. J. Watson	Adolphustown.
	4	P. Johnstone	Camden East.
	5	W. Whelan	Centreville.
	6	J. A. Zimmerman	Odessa.
	7	James Aylesworth	Tamworth.
Lincoln	1	James B. Secord	Niagara.
	2	W. A. Mittleberger	St. Catharines.
	3	Isaac Springstead	Smithville.
	4	C. E. Riggins	Beamsville.
Middlesex	1	W. J. McIntosh	London.
	2	William Dickson	Parkhill.
	3	J. Flanagan	Clandeboye.
	4	C. J. Fox	Delaware.
	5	G. Wilson	Glencoe.
	6	J. English	Strathroy.
	7	Isaac N. Burdick	Dorchester Station.
	8	B. E. Sifton	Arva.
	9	E. S. Jarvis	London.

List of all the Division Court Clerks, etc.—*Continued.*

County.	No. of Division.	Name of Clerk.	Post Office Address.
Muskoka	1	T. M. Bowerman	Bracebridge.
	2	J. H. Jackson	Severn Bridge.
	3	J. R. Reece	Huntsville.
	4	R. G. Penson	Port Carling.
Nipissing	1	J. D. Cockburn	Sturgeon Falls.
	2	John McMeekin	Mattawa.
	3	John G. Cormack	North Bay.
	4	Wm. B. Aird	Sudbury.
Norfolk	1	W. R. Griffin	Simcoe.
	2	Ed. Matthews	Waterford
	3	R. Green	Windham Centre.
	4	C. S. Harris	Courtland.
	5	M. J. McCall	Vittoria.
	6	S. P. Mabee	Port Rowan.
	7	D. C. Brady	Houghton.
	8	Lawrence Skey	Port Dover.
Northumberland and Durham	1	F. Cubitt	Bowmanville.
	2	S. Wilmot	Newcastle.
	3	G. M. Furby	Port Hope.
	4	John Hunter	Millbrook.
	5	A. G. Boswell	Cobourg.
	6	H. Lawless	Grafton.
	7	W. Johnson	Colborne.
	8	M. P. Ketchum	Brighton.
	9	R. P. Hurlburt	Warkworth.
	10	T. R. Garrett	Wooler.
	11	D. Kennedy	Campbellford.
Ontario	1	D. C. Macdonell	Whitby.
	2	M. Gleeson	Greenwood.
	3	J. W. Burnham	Port Perry.
	4	Z. Hemphill	Uxbridge.
	5	Geo. Smith	Cannington.
	6	G. F. Bruce	Beaverton.
	7	F. J. Gillespie	Uptergrove.
Oxford	1	F. W. Macqueen	Woodstock.
	2	M. F. Ainsley	Drumbo.
	3	Robert Murray	Embro.
	4	Jas. Barr	Norwich.
	5	James Stevens	Ingersoll.
	6	J. Hodgson	Tilsonburgh.
Parry Sound	1	R. H. Stewart	Parry Sound.
	2	H. Armstrong	McKellar P. O.
	3	E. Sirett	Rosseau.
	4	James Sharpe	Burk's Falls.
	5	J. G. Best	Maganetawan.
	6	R. B. Maw	Commanda.

List of all the Division Court Clerks, etc.—*Continued.*

County.	No. of Division.	Name of Clerk.	Post Office Address.
Peel	1	J. W. Main	Brampton.
	2	Thomas K. Beaty	Streetsville.
	3	John Harris	Caledon.
	4	F. W. Bolton	Bolton.
Perth	1	D. B. Burritt	Stratford.
	2	George K. Matheson	Mitchell.
	3	E. Long	St. Marys.
	4	G. Brown	Shakespeare.
	5	Thomas Trow	Milverton.
	6	W. J. Hay	Listowel.
Peterborough	1	R. W. Errett	Peterborough.
	2	Thomas Fraser	Norwood.
	3	T. Campbell	Keene.
	4	S. Sherin	Lakefield.
	5	C. R. D. Booth	Apsley.
Prescott and Russell	1	David Buchan	L'Orignal.
	2	John Shields	Vankleek Hill.
	3	W. Allison	Stardale.
	4	Thomas A. Van Bridger	Plantagenet.
	5	J. S. Cameron	Cumberland.
	6	A. Carson	Russell.
	7	R. Lawlor	Hawkesbury.
	8	J. Downing	Fournier.
	9	F. W. Langrell	Alfred.
	10	P. D. McDonald	Rockland.
	11	Perer Stewart	Grant.
Prince Edward	1	Robert Boyle	Picton.
	2	Hy. Haight	Milford.
	3	I. Hamilton	Demorestville.
	4	William C. DeLong	Ameliasburg.
	5	J. B. Garratt	Wellington.
	6	A. B. Saylor	Bloomfield.
	7	J. M. Cadman	Consecon.
	8	B. E. Harrison	Waupoos.
Rainy River	1	Thomas A. Findlay	Rat Portage.
	2	William Wilson	Fort Francis.
Renfrew	1	W. C. Irving	Pembroke.
	2	T. E. Thwaites	Beachburg.
	3	George Eady, jr	Renfrew.
	4	George E. Neilson	Arnprior.
	5	John Barnard	Shamrock.
	6	James Reeves	Eganville.
	7	Robert Allen	Cobden.
	8	J. C. Gurney	Rockingham.

List of all the Division Court Clerks, etc.—*Continued.*

County.	No. of Division.	Name of Clerk.	Post Office Address.
Simcoe	1	A. J. Lloyd	Barrie.
	2	H. W. Manning	Bradford.
	3	Joel Rogers	Beeton.
	4	R. G. Campbell	Collingwood.
	5	A. Craig	Craighurst.
	6	J. P. Henderson	Orillia.
	7	J. A. Mather	New Lowell.
	8	J. G. Hood	Alliston.
	9	Harry Jennings	Penetanguishene.
	10	J. C. Steele	Coldwater.
Stormont, Dundas and Glengarry	1	G. H. McGillivray	Williamstown.
	2	C. D. Chisholm	Alexandria.
	3	C. J. Mattice	Cornwall.
	4	Asaph Dawson	Dickenson's Landing.
	5	Wm. Garvey	Morrisburg.
	6	J. N. Tuttle	Iroquois.
	7	W. J. Ridley	South Mountain.
	8	J. A. Cockburn	Crysler.
	9	P. Stuart	Bainsville.
	10	W. Rae	Chesterville.
	11	D. McIntosh	Monckland.
	12	J. R. McKenzie	Skye.
Thunder Bay	1	W. H. Laird	Port Arthur.
	2	John Aikins	English River.
	3	Wm. McLean	Fort William.
Victoria	1	Peter McSweyn	Woodville.
	2	G. Cunningham	Fenelon Falls.
	3	Irvine Junkin	Bobcaygeon.
	4	James D. Thornton	Omemee.
	5	O. J. McKibbin	Lindsay.
	6	J. F. Cummings	Oakwood.
	7	A. C. Graham	Victoria Road.
Waterloo	1	A. J. Peterson	Berlin.
	2	Otto Klotz	Preston.
	3	Thomas Field	Galt.
	4	W. D. Watson	Ayr.
	5	J. Allchin	New Hamburg.
	6	R. Morrison	Hawkesville.
	7	J. L. Wideman	St. Jacobs.
Welland	1	G. L. Hobson	Welland.
	2	Paul J. Wilson	Marshville.
	3	T. Newbigging	Fort Erie.
	4	J. A. Orchard	Niagara Falls, South.
	5	John J. Gearin	Thorold.
	6	A. K. Schofield	Port Colborne.

List of all the Division Court Clerks, etc.—*Concluded.*

County.	No. of Division.	Name of Clerk.	Post Office Address.
Wellington	1	A. A. Baker	Guelph.
	2	William Nicoll	Morriston.
	3	D. L. Schultz	Rockwood.
	4	T. W. Thompson	Fergus.
	5	W. Tyler	Erin.
	6	Hugh Hamilton	Elora.
	7	G. Allan	Glenallan.
	8	Dennis Driscoll	Arthur.
	9	Guy Leslie	Orangeville.
	10	A. C. R. Saunders	Harriston.
	11	J. C. Wilkes.	Mount Forest.
	12	L. R. Adams	Drayton.
Wentworth	1	H. T. Bunbury	Hamilton.
	2	F. D. Suter	Dundas.
	3	J. McMonies, jr	Waterdown.
	4	W. McDonald	Rockton.
	5	A. G. Jones	Stoney Creek.
	6	L. A. Gurnet	Ancaster.
	7	J. McClement	Glanford.
	8	J. T. Taylor	Binbrook.
	9	R. L. Gunn	Hamilton.
York	1	A. McL. Howard	Toronto.
	2	J. Stephenson	Unionville.
	3	J. M. Lawrence	Richmond Hill.
	4	D. Lloyd	Newmarket.
	5	Warren P. Cole	Sutton, West.
	6	A. Armstrong	Lloydtown.
	7	John Nattress	Woodbridge.
	8	John Paule	Weston.
	9	J. H. Richardson	West Hill.
	10	E. H. Duggan	Toronto.

TABLE C.

LIST of all the Division Court Bailiffs, their Post Office Address, the County and Number of Division in which their Courts are situated, for the Province of Ontario, up to 31st December, 1886, inclusive.

COUNTY.	No. of Division.	Name of Bailiff.	Post Office Address.
Algoma	1	Robert Rush	Sault Ste. Marie.
	2	James Mills	Bruce Mines.
	3	D. McKenzie	Little Current.
	4	J. Gorley	Manitowaning.
	5	E. H. Jackson	Gore Bay.
	6	Daniel McPhail	Marksville, St. Jos. Is.
Brant	1	Joseph Jackson	Brantford.
	2	A. Huson	Paris.
	3	G. S. Waite	South Dumfries.
	4	Joseph H. Jackson	Brantford.
	5	Charles Wheeland	Scotland.
	6	Matthew Day	Onondaga.
Bruce	1	M. Thompson	Walkerton.
	2	P. Corrigan	Holywood.
		John Farquharson	Teeswater.
	3	Alex. Campbell	Kincardine.
	4	W. W. Hogg	Paisley.
	5	M. Hunter	Port Elgin.
	6	Gore Leggett	Underwood.
	7	John D. White	Invermay.
	8	H. Trout	Wiarton.
	9	Donald McDonald	Ripley.
	10	Edward Barley	Lion's Head.
Carleton	1	R. Hamilton	Ottawa.
		John Whitton	Ottawa.
	2	John Reilly	Richmond.
	3	E. J. Hughes	Carp.
	4	W. A. Shirreff	Fitzroy Harbor.
	5	Chas. C. Whale	Manotick.
	6	John Eastman	Osgoode.
	7	A. Wilson	Hintonburgh.
Dufferin	1	James McQuarrie	Orangeville.
	2	E. F. Bowes	Shelburne.
	3	A. Cauthers	Stanton.
	4	James McQuarrie	Orangeville.
	5	Robert Beales	Grand Valley.
Elgin	1	W. W. White	Aylmer.
	2	Henry Thornton	St. Thomas.
	3	Henry Thornton	St. Thomas.
	4	John McCallum	West Lorne.
Essex	1	Allois Master	Sandwich.
	2	William Kelly	Amherstburg.
		C. Wright	Amherstburg.
	3	George Malott	Kingsville.
	4	G. Pearce	Harrow.
	5	J. McGaw	Leamington.
		Jesse T. Brown	Leamington.
	6	William Mann	Comber.
	7	A. Botsford	Windsor.
		J. S. Askew	Windsor.
	8	Richard E. Millard	Essex Centre.

List of all the Division Court Bailiffs, etc.—*Continued.*

County.	No. of Division.	Name of Bailiff.	Post Office Address.
Frontenac	1	M. Furlong	Wolfe Island.
		J. A. Gardner	Kingston.
	2	John A. Gardner	"
	3	James Cosgrove	Oates.
	4	M. W. Price	Mountain Grove.
		Henry Sly	Verona.
		Samuel Mitchell	Plevna.
	5	Samuel Mitchell	Plevna.
		William J. Arthur	Battersea.
	6	Thomas B. Campbell	Sharbot Lake.
		Matthew W. Price	Mountain Grove.
Grey	1	Robert Edgar	Owen Sound.
	2	James Carson	Durham.
	3	Andrew Watt	Meaford.
	4	A. Mitchell	Clarksburg.
	5	A. S. Vandusen	Flesherton.
	6	W. B. Simpson	Chatsworth.
Haldimand	1	E. J. Wigg	Caledonia.
	2	Andrew Finlan	Cayuga.
	3	J. Clemow	Dunnville.
	4	David Byers	Selkirk.
	5	E. W. Robins	Canboro'.
	6	F. Hartwell	Jarvis.
Haliburton	1	R. C. Garratt	Minden.
	2	John Stothart	Haliburton.
Halton	1	J. A. Frazer	Milton.
	2	John Weir	Oakville.
	3	John Hayes	Georgetown.
	4	William Hemstreet	Acton.
	5	E. Chapman	Campbellville.
	6	J. W. Henderson	Burlington.
Hastings	1	Peter Maybee	Belleville.
		George W. Sills	Belleville.
	2	J. E. Bleeker	Frankford.
	3	W. E. Pearsall	Shannonville.
	4	W. J. Bowell	Tweed.
	5	C. Butler	Sterling.
	6	John Allen Huff	Madoc.
	7	J. L. Ferguson	Deseronto.
	8	D. Phillips	Foxboro'.
	9	L. Cruickshank	Trenton.
	10	James C. Bowen	Marmora.
	11	James Mairs	Bridgewater.
	12	N. H. Stephenson	Bancroft.
Huron	1	John Knox	Goderich.
	2	Joseph P. Brine	Seaforth.
	3	D. Dickenson	Clinton.
	4	Finlay S. Scott	Brussels.
	5	John Gill	Exeter.
	6	Joseph Mallough	Dungannon.
	7	J. Ferguson	Bayfield.
	8	John Snell	Wingham.
	9	John Brethauer	Wroxeter.
	10	Ed. Bossenberry	Zurich.
	11	J. Beanes	Crediton.
	12	William Campbell	Blyth.

List of all the Division Court Bailiffs, etc.—*Continued.*

County.	No. of Division.	Name of Bailiff.	Post Office Address.
Kent	1	Charles J. Moore	Chatham.
	1	T. H. Nelson	Chatham.
	2	Wm. Teetzel	Ridgetown.
	3	John Gillespie	Dresden.
	4	W. R. Fellows	Blenheim.
	4	John A. Little	Blenheim.
	5	Thomas Forham	Wallaceburgh.
	6	H. F. Smith	Bothwell.
	6	S. J. Thomas	Bothwell.
	7	M. Dillon	Merlin.
Lambton	1	Robert Miller	Sarnia.
	2	J. F. Elliott	Watford.
	3	Richard L. Bobier	Florence.
	4	N. Cornwall	Sombra.
	5	Eugene Mason	Wyoming.
	6	J. G. Braddon	Thedford.
	7	John McGill	Corunna.
	8	John Sinclair	Petrolea.
	9	W. Fitzpatrick	Alvinston.
Lanark	1	James Patterson	Perth.
	2	Robert Watt	Lanark.
	3	John McPherson	Carleton Place.
	4	H. D. Chalmers	Smith's Falls.
	5	Thomas Somerton	Pakenham.
	6	John Slattery	Almonte.
Leeds and Grenville	1	H. McPhail	Brockville.
	1	Uri Marshall	Brockville.
	2	J. Jenkissen	Prescott.
	3	S. F. Grenizan	Gananoque.
	4	J. Dickinson	Kemptville.
	5	P. Dowdall	Merrickville.
	6	W. H. Denaut, jr.	Delta.
	6	S. R. Ransom	Delta.
	7	R. Richards	Frankville.
	8	Chester Stuart	Newboro'.
	9	W. S. Bilton	Westport.
	9	G. W. Brown	Farmersville.
	10	Wm. Still, jr.	Spencerville.
	10	David P. Snyder	Spencerville.
	11	S. J. Whaley	North Augusta.
	12	W. J. Mallory	Mallorytown.
Lennox and Addington	1	Z. Ham	Napanee.
	2	R. R. Finkle	Bath.
	3	D. Daverne	Adolphustown.
	4	Z. Ham	Napanee.
	5	P. Vanderwater	Centreville.
	6	John W. Denyes	Odessa.
	7	P. F. Carscallen	Tamworth.
	7	Dennis Craigen	Cloyne.

List of all the Division Court Bailiffs, etc.—*Continued.*

County.	No. of Division.	Name of Bailiff.	Post Office Address.
Lincoln	1	P. Henigan	Niagara.
	2	J. S. Clement	St. Catharines.
	3	A. D. Lacey	Smithville.
	4	F. B. Rodgers	Beamsville.
Middlesex	1	John Burns	London East.
	2	Edward Manes	Parkhill.
	3	G. W. Hodgins	McGillivray.
	4	J. Fitzallen	Delaware.
	5	James A. Watterworth	Glencoe.
	6	Thomas O. Curry	Strathroy.
	7	John Beverly	Dorchester Station.
	8	Wm. H. Brock	Arva.
	9	Isaac Nixon	London East.
Muskoka	1	W. J. Hill	Bracebridge.
	2	T. M. Robinson	Gravenhurst.
	3	C. Peacock	Huntsville.
	4	Roger Mahon	Port Carling.
Nipissing	1	H. Kinch	Sturgeon Falls.
	2	X. Ranger	Mattawa.
	3	Wesley Coleman	North Bay.
	4	Michael Carney	Sudbury.
Norfolk	1	E. G. Wells	Simcoe.
	2	Edward Grace	Waterford.
	3	D. C. Wood	Simcoe.
	4	Robert Power	Delhi.
	5	A. Wood	Vittoria.
	6	Henry C. Ellis	Port Rowan.
	7	H. J. Mitchener	Clear Creek.
	8	Hiram Fairchild	Port Dover.
Northumberland and Durham	1	John McDougall	Bowmanville.
	2	N. A. Jerome	Orono
	3	Thomas Orr Monahan	Port Hope.
	4	Thomas H. Sargent	Omemee.
	5	O. Dean	Cobourg.
	6	Thomas Patterson	Grafton.
	7	John Reives	Colborne.
	8	Wm. Martin	Brighton.
	9	David Robertson	Warkworth.
	10	W. H. Richards	Wooler.
	11	Robert Cook	Campbellford.
Ontario	1	J. W. Palmer	Whitby.
	2	C. W. Matthews	Brougham.
	3	James D. Paxton	Port Perry.
	4	J. C. Widdifield	Uxbridge.
	5	R. J. Harwood	Cannington.
	6	James C. Edgar	Beaverton.
	7	Joseph Fox	Millington.

List of all the Division Court Bailiffs, etc.—*Continued.*

County.	No. of Division.	Name of Bailiff.	Post Office Address.
Oxford	1	M. Vertue	Woodstock.
	2	L. S. Kennedy	Richwood.
	3	Geo. C. McKay	Embro.
	4	Wm. Stroud	Norwich.
	5	James Brady	Ingersoll.
	6	M. Dillon	Tilsonburgh.
Parry Sound	1	T. W. George	Parry Sound.
	2	W. J. Moffatt	McKellar.
	3	Frank Wing	Rosseau.
	4	Archibald Menzies	Burk's Falls.
	5	William E. Kennedy	Magnetawan.
	6	David Ricker	Gurd Township.
Peel	1	William Broddy	Brampton.
	2	R. Irwin	Streetsville.
	3	James K. Leslie	Caledon.
	4	J. C. Switzer	Albion.
Perth	1	Thomas Tobin	Stratford.
		Thomas S. Tobin	Stratford.
	2	J. S. Coppin	Mitchell.
	3	William Box	St. Mary's.
	4	J. W. Donaldson	Shakespeare.
	5	John J. Whaley	Milverton.
	6	Robert Hay	Listowel.
Peterboro'	1	Chas. Stapleton	Peterboro'.
	2	A. R. Anderson	Norwood.
	3	A. W. McIntyre	Keene.
	4	R. Chapin	Lakefield.
	5	Alexander Graham	Clanricarde.
Prescott and Russell	1	George Gale	L'Orignal.
	2	Thomas Shields	Vankleek Hill.
	3	P. Kelly	St. Eugene.
	4	Wm. Adolphus McKay	Plantaganet.
	5	Docitte Lavergne	Cumberland.
	6	C. D. Helmer	Russell.
	7	M. Costello	L'Orignal.
	8	C. Gates	Fournier.
		Victor Leger	St. Isadore.
	9	Jules Boileau	Alfred.
	10	Jas. Surtees	Rockland.
	11	E. M. Casselman	Casselman.
Prince Edward	1	A. M. Buchanan	Picton.
	2	Marshall Palen	Milford.
	3	Edward R. Nixon	Demorestville.
	4	A. Harvey	Ameliasburg.
	5	Thos. Jackson	Wellington.
	6	Alex. McDonald	Hallowell.
	7	Harman W. Weeks	Consecon.
	8	E. A. Williams	Waupoose.

List of all the Division Court Bailiffs, etc.—*Continued.*

County.	No. of Division.	Name of Bailiff.	Post Office Address.
Rainy River	1	W. H. McKay	Rat Portage.
	2	W. Lindsay	Fort Francis.
Renfrew	1	George Mitchell	Pembroke.
		James Millar	Pembroke.
	2	A. Acheson	Westmeath.
	3	S. O'Gorman	Renfrew.
	4	Wm. Wilson	Arnprior.
		John Lyon	Arnprior.
	5	John Hughes	Dacre.
	6	Hugh Gallagher	Eganville.
	7	Geo. Marshall	Cobden.
	8	John Hartney	Rockingham.
Simcoe	1	John Weaymouth	Barrie.
	2	L. Algeo	Bradford.
	3	S. H. Washburn	Beeton.
	4	A. W. S. Cunningham	Collingwood.
	5	James Martin	Hillsdale.
	6	J. G. Wilson	Orillia.
	7	John Orr, junior	New Lowell.
	8	F. M. Woolcock	Alliston.
	9	A. Sneath	Penetanguishene.
	10	Thomas Blaney	Coldwater.
Stormont, Dundas and Glengarry	1	J. A. Robertson	Lancaster.
	2	S. R. McLeod	Alexandria.
	3	D. McDonell	Cornwall.
	4	H. Bush	Lunenburg.
		L. Warner	Osnabruck Centre.
	5	Jacob Hopper	Morrisburg.
	6	Wm. A. Coons	Iroquois.
	7	A. Redmond	Inkerman.
	8	Samuel Dillobough	Crysler.
	9	J. A. Robertson	Lancaster.
	10	A. Stallmayer	Chesterville.
	11	Martin Malony	Monckland.
	12	S. R. McLeod	Alexandria.
Thunder Bay	1	W. H. Hesson	Port Arthur.
	2	Joseph McKinnon	English River.
	3	P. F. McCallum	Fort William.
Victoria	1	Alexander B. McLean	Woodville.
	2	John Austin	Fenelon Falls.
	3	Thos. Cheetham	Bobcaygeon.
	4	George A. Balfour	Omemee.
	5	George McHugh	Lindsay.
	6	Wm. Henry McLaughlin	Oakwood.
	7	William Boden	Victoria Road.
Waterloo	1	J. Klippert	Berlin.
	2	John Kirkpatrick	Galt.
	3	John Kirkpatrick	Galt.
	4	E. Bourchier	Washington.
	5	Jonathan Cook	New Hamburgh.
	6	Benj. J. Ballard	Hawkesville.
	7	Benj. J. Ballard	Hawkesville.

List of all the Division Court Bailiffs, etc.—*Concluded.*

County.	No. of Division.	Name of Bailiff.	Post Office Address.
Welland	1	Casper Ramey	Welland.
	2	Edward Henderson	Marshville.
	3	George Graham	International Bridge.
	4	J. D. Fralick	Niagara Falls, South.
	5	Lanson Theal	Thorold.
	6	A. Boyer	Port Colborne.
Wellington	1	P. Spragge	Guelph.
	2	J. H. Doughty	Aberfoyle.
	3	Wm. Hemstreet	Acton.
	4	Archibald McMillan	Fergus.
	5	James Broddy	Erin.
	6	Wm. Findlay	Elora.
	7	George Mellis	Glenallan.
	8	David T. Small	Arthur.
	9	James McQuarrie	Orangeville.
	10	J. Livingston	Harriston.
	11	A. Godfrey	Mount Forest.
	12	S. B. Trask	Drayton.
Wentworth	1	Wm. Hunter	Hamilton.
	2	F. P. Hanes	Dundas.
	3	John Graham	Waterdown.
	4	Emerson Clement	Troy.
	5	S. Springsted	Stoney Creek.
	6	F. P. Hanes	Dundas.
	7	A. de C. Boyes	Binbrook.
	8	A. de C. Boyes	Binbrook.
	9	J. Greenfield	Hamilton.
York	1	J. M. Wingfield	Parkdale.
	1	St. John Sevens	Toronto.
	2	James Stewart	Toronto.
	3	James Stewart	Toronto.
	4	Wm. Malloy	Newmarket.
	5	R. A. Sheppard	Sutton West.
	6	James W. Crossley	Lloydtown.
	7	James Stewart	Toronto.
	8	James Stewart	Toronto.
	9	W. Luke	West Hill.
	10	Peter Small	Toronto.

TABLE D.

DIVISION COURTS AND THE LIMITS OF THE RESPECTIVE DIVISIONS IN THE PROVINCE OF ONTARIO.

DISTRICT OF ALGOMA.

1.—Bounded west by Thunder Bay District, 87th parallel of west longitude, and east by Barr River, including all the islands in front.

2.—Bounded west by Barr River, and east by Serpent River.

3.—Bounded west by Serpent River, and east by the eastern boundary of the District, including that part of the Island of Manitoulin lying north of the line between the 6th and 7th concessions of the Township of Sheguindah, the 4th and 5th concessions of the Township of Bidwell, and the 6th and 7th concessions to the line between lots number 17 and 18 in the Township of Billings, together with all the islands in front, except Barrie Island and that part of Manitoulin not described as above.

4.—Consisting of all that part of Manitoulin lying east of Manitowaning and South Bays, and south of the line between the 6th and 7th concessions of Sheguindah, and 4th and 5th concessions of Bidwell, the 6th and 7th concessions of Billings to the line between lots 17 and 18, thence southerly along said line to Lake Mindemoya, thence south-westerly along the shore of the said lake to the town line between Billings and Carnarvon, thence westerly along the said line and through the Township of Campbell, between the 6th and 7th concessions to the westerly boundary thereof, thence southerly along said boundary to the shores of Lake Huron.

5.—Being composed of all that part of Manitoulin Island not contained in Divisions 3 and 4, and of Barrie Island.

6.—Consisting of St. Joseph's Island and Cockburn Island.

COUNTY OF BRANT.

1.—The City of Brantford, and that part of the Township of Brantford not included in the other Divisions hereinafter described.

2.—The Town of Paris, and that part of South Dumfries west of the line between lots 18 and 19, and that part of the first concession of the Township of Brantford lying west of a continuation of the last mentioned line.

3.—The remainder of the Township of South Dumfries and of the first concession of the Township of Brantford.

4.—The ten northern concessions of the Township of Burford, and that part of the 2nd, 3rd, 4th and 5th concessions of the Township of Brantford, west of the line between lots numbers 10 and 11, and that portion of the Kerr Tract west of a continuation of the last mentioned line.

5.—The Township of Oakland, the four southern concessions of the Township of Burford, and lots numbers 1 to 5, inclusive, in the ranges east and west of the Mount Pleasant Road, in the Township of Brantford, adjoining the Township of Oakland.

6.—The Townships of Onondaga and Tuscarora, and that part of the Township of Brantford lying south of the main road from Brantford to Hamilton, and east of Fairchild's Creek.

COUNTY OF BRUCE.

1.—The Town of Walkerton, and the Township of Carrick, and all the Township of Brant south of the line between the 11th and 12th concessions.

2.—The Village of Teeswater, all the Township of Culross, and that part of the Township of Greenock lying south of the line between the 11th and 12th concessions and Village of Lucknow, and all of Kinloss Township not in number nine.

3.—The Town of Kincardine, and that part of the Township of Kincardine lying south of a line drawn between the 9th and 10th concessions.

4.—The Village of Paisley and that part of the Township of Brant lying north of a line drawn between the 11th and 12th concessions of the Township of Brant.

All the Township of Elderslie, except lots 16 to 36, both inclusive, in concessions 12, 13 and 14 of said Township.

All the Township of Greenock lying north of a line drawn between concessions 11 and 12 of said Township.

Lots 26 to 35, both inclusive, in the 8th, 9th, 10th, 11th, 12th, 13th and 14th, concessions of the Township of Bruce; and that part of the Township of Saugeen lying east of a line between lots 28 and 29, and south of the production of the town line between the Townships of Arran and Elderslie to the Saugeen River.

5.—All Saugeen Township not included in No. 4, all that part of the township of Arran lying west of a line between lots 10 and 11 and north of Arran Lake and the outlet of said lake, and that part of the Township of Amabel lying south of the 10th concession of Amabel, and the Villages of Port Elgin and Southampton.

6.—The Village of Tiverton, and that portion of Kincardine Township north of a line drawn between concessions 9 and 10 in said Township, and all the Township of Bruce, except that part included in No. 4.

7.—That part of the Township of Elderslie not included in No. 4, and that part of Arran Township not included in No. 5, and the Village of Tara.

8.—The Village of Wiarton, the Township of Albermarle, and that part of the Township of Amabel lying north of a line between the 9th and 10th concessions.

9.—All the Township of Huron, and that part of the Township of Kinloss, described as follows:—

Commencing at the boundary line between said Townships of Huron and Kinloss, at a point at which the blind line between the 12th concession of said Township of Kinloss,

and the third range south of the Durham Road, in the said Township of Kinloss, commences ; thence in an easterly direction along said blind line to the westerly side of the Goderich Gravel Road, or the 10th side line of said Township of Kinloss ; thence along said 10th side line in a southerly direction to the boundary line of the County of Huron ; thence in a westerly direction along said last mentioned boundary to the said line between Huron and Kinloss aforesaid ; thence northerly along said last named boundary line to the place of beginning.

10.—All the Townships of Eastnor, Lindsay, and St. Edmunds.

COUNTY OF CARLETON.

1.—Comprising all the City of Ottawa, and the Township of Gloucester, to lot 15 inclusive, Rideau front and concessions 1 to 6, inclusive, Ottawa front and the Islands in the Ottawa River opposite thereto.

2.—All the Township of Goulbourn ; the 8th, 9th and 10th concessions of the Township of Marlborough ; all that portion of the Township of Nepean, south of the River Goodwood ; and the 4th, 5th and 6th concessions thereof, north of the same river to the boundary line between lots 20 and 21 in the last mentioned concessions.

3.—All the Township of Huntley, and all the Township of March, except lots 1 to 5, inclusive, in concessions 1, 2, 3 and 4 thereof.

4.—All the townships of Fitzroy and Torbolton.

5.—All the Township of North Gower ; Long Island in the Rideau River and the 1st, 2nd, 3rd, 4th, 5th, 6th and 7th concessions of the Township of Marlborough.

6.—All the Township of Osgoode ; the 6th, 7th, and 8th concessions Ottawa front, and from lots 16 to 30, inclusive, of the Rideau front of the Township of Gloucester.

7.—All the Township of Nepean, except the City of Ottawa and the part of the said Township lying south of the River Goodwood, and concessions 4, 5 and 6, north of said River Goodwood to the boundary line between lost 20 and 21 in said last mentioned concessions, and including also lots 1 to 5, inclusive, in concessions 1, 2, 3 and 4, in the Township of March.

COUNTY OF DUFFERIN.

1.—The Town of Orangeville, the Township of East Garafraxa, and all that portion of the Township of Amaranth lying south of the southerly boundary of lot number 26, in each concession of the Township of Amaranth.

2.—The Village of Shelburne, the Township of Melanchton and all that portion of the Township of Amaranth lying north of the southerly boundary of lot number 26, in each concession of the Township of Amaranth.

3.—The Township of Mulmur.

4.—The Township of Mono.

5.—The Township of East Luther.

COUNTY OF ELGIN.

1.—The Townships of Bayham, Malahide and South Dorchester.

2.—The Townships of Southwold and Yarmouth (except the City of St. Thomas).

3.—The City of St. Thomas.

4.—The Townships of Aldborough and Dunwich.

COUNTY OF ESSEX.

1.—Town of Sandwich and Township of Sandwich West.

2.—Town of Amherstburg and Townships of Malden and Anderdon.

3.—The Village of Kingsville, and all that part of the Township of Gosfield not included in Division No. 8.

4.—The Township of Colchester South, and all that part of Colchester North, south of the 9th concession, exclusive of the said concession and the lots on both sides of Malden Street.

5.—Township of Mersea and Village of Leamington.

6.—Bell River, and the Townhsip of Tilbury West, and Rochester.

7.—Town of Windsor, and Townships of Sandwich East Maidstone, north of the Middle Road.

8.—All that part of the Township of Maidstone lying south of the Middle Road ; so much of Sandwich East as is south of Talbot Street, including the lots on both sides of said street to Nos. 306 and 307 ; all of Colchester north of the 9th concession, including said concession and lots on both sides of Malden Street and all that part of Gosfield lying north of concession 6, and extending as far east from the limits between Gosfield and Colchester as lot No. 12, including such lot in each concession north of concession 6, inclusive.

COUNTY OF FRONTENAC.

1.—City of Kingston, Townships of Garden Island, Wolf Island, Howe Island and part of the Township of Pittsburg.

2.—Cataraqui, comprising the Township of Kingston and the Village of Portsmouth.

3.—Loughboro', comprising the Townships of Loughboro' and Bedford.

4.—Verona, comprising the Townships of Portland and Hinchinbrooke.

5.—Sunbury, comprising the Townships of Storrington and part of the Township of Pittsburg.

6.—Comprising the Townships of Kennebec, Olden, Oso, Barrie, Clarendon, Palmerston, Miller, North Canonto and South Canonto.

COUNTY OF GREY.

1.—The Town of Owen Sound ; the Village of Brooke ; and the Townships of Darby, Keppel, Sarawak and Sydenham.

2.—The Town of Durham, and the Townships of Bentinck, Egremont, Normanby and Glenelg, except the part of Glenelg being composed of the ranges of lots lying parallel to the Toronto and Sydenham Road, which ranges form part of the Fifth Division.

3.—The Town of Meaford, the Township of St. Vincent, and the west half of the Township of Euphrasia.

4.—The Township of Collingwood, the East half of Euphrasia, and the east half of the Township of Osprey.

5.—The Townships of Artemesia and Proton ; the west half of Osprey, and that part of Glenelg consisting of the ranges of lots lying parallel to the Toronto and Sydenham Road.

6.—The Townships of Holland and Sullivan.

COUNTY OF HALDIMAND.

1.—All the Township of Seneca, except the first and second concessions, the Young Tract, and the property of the late Richard Martin and the late Robert Wier ; all the Township of Oneida, except the first range north of the Cayuga line ; the Dennis Tract and the lots southerly of said tract.

2.—The whole of the Township of North Cayuga, except that portion thereof lying north-east of side line between lots 12 and 13 ; the first and second concessions of the Township of Seneca, excepting that portion thereof lying north-east of the side line between lots 12 and 13 ; the Young Tract, and the lands of the late Robert Weir and the late Richard Martin, Esquires ; the first range of Oneida and north of Cayuga line ; also the Dennis Tract and river lots lying south.

3.—The Townships of Moulton, Sherbrooke and Dunn, including the Village of Dunnville.

4.—The Townships of South Cayuga and Rainham.

5.—The Township of Camboro, and those portions of North Cayuga and Seneca not included in the other divisions.

6.—The Township of Walpole.

COUNTY OF HALIBURTON.

1.—The Townships of Glamorgan, Snowden, Lutterworth, Minden, Anson, Stanhope, Hindon, Sherbourne and McClintock.

2.—The Townships of Dysart, Guilford, Havelock, Livingstone, Lawrence, Eyre, Harburn, Dudley, Monmouth, Cardiff, Harcourt, Bruton, Clyde and Nightingale.

COUNTY OF HALTON.

1.—All that portion of the Township of Trafalgar from the line between the 5th and 6th concessions of the New Survey west to the township line, and from the line between lots 18 and 19 in the Old Survey, also westerly to the town line.

2.—The remaining part of the Township of Trafalgar east of the limits of Division No. 1.

3.—The five easterly concessions of the Township of Esquesing.

4.—The six westerly concessions of the Township of Esquesing.

5.—The Township of Nassagaweya.

6.—The Township of Nelson.

COUNTY OF HASTINGS.

1.—To comprise the city of Belleville.

2.—To comprise all that part of the Township of Sidney which lies east of the line between lots Nos. 6 and 7 in the several concessions, and south of the 9th concession.

3.—The Township of Tyendenaga, except that part called Deseronto.

4.—The Township of Hungerford.

5.—All that part of the Township of Sidney which lies to the north of the 8th concession, and to the east of lot No. 6 in each concession north of the 8th concession, and all that part of the Township of Rawdon which lies to the south of the 9th concession, and that part of the Township of Huntingdon south of the 6th concession.

6.—The Townships of Madoc, Tudor, Limerick, excepting that part lying north of the 10th concession, and also that part lying west of lots 25 in the different concessions, south of the 11th concession of said Township, and including all that part of the Township of Huntingdon north of the 5th concession of said Township.

7.—The Village of Deseronto.

8.—The Township of Thurlow.

9.—The Town of Trenton, and all that part of the Township of Sidney which lies to the west of lot No. 7 in each of the concessions of the said Township, including Mill Island.

10.—The Townships of Marmora, Lake, and all that part of the Township of Rawdon which lies to the north of the 8th concession.

11.—The Townships of Elzevir, Grimsthorpe, Cashel, excepting that part of Cashel lying north of the 10th concession of said Township.

12.—The Townships of Wollaston, Faraday, Herschel, McClure, Wicklow, Bangor, Carlow, Monteagle, Dungannon, Mayo, and all that part of the Township of Cashel lying north of the 10th concession of said Township, and all those parts of the Township of Limerick lying north of the 10th concession, and west of lot No. 25 in the several concessions in said Township of Limerick.

COUNTY OF HURON.

1.—Comprising that part of the Township of Goderich to the north of the Cut Line and the Huron Road until the same meets the road allowance between the 13th and 14th concessions: then back along the Huron Road to its junction with the Cut Line; then west by the road allowance between concessions 11 and 12 to the River Maitland; then along the River Maitland to Goderich, together with the Township of Colborne.

2.—Comprising the Township of McKillop, the Town of Seaforth, and all that portion of the Township of Tuckersmith not included in the Third Division.

3.—Comprising the Township of Hullett; that part of the Township of Goderich not included in Numbers 1 and 7; 1st, 2nd, 3rd and 4th concessions Township of Stanley; 1st and 2nd concessions Township of Tuckersmith, L. R. S., north of lot 15, and that portion west of side-road between lots 25 and 26, H. R. S.: and Town of Clinton.

4.—Comprising the Township of Grey; all of the Township of Morris, east of side-road between lots numbers 10 and 11; and the Village of Brussels.

5.—Comprising the Townships of Usborne and Stephen, the first four concessions of the Township of Hay, and the Village of Exeter.

6.—Comprising the Townships of West Wawanosh and Ashfield.

7.—Comprising the Township of Goderich south of Cut Line and Huron Road until the same joins the road between the 13th and 14th concessions of the Township of Goderich; thence along the said concession until the same joins the river Bayfield; all Stanley not included in number 3; all Hay not included in number 5, and the Village of Bayfield.

8.—Comprising the Village of Wingham, the Townships of Turnberry and East Wawanosh, all the Township of Morris not included in number 4, and the Village of Blyth.

9.—Comprising the Township of Howick and the Village of Wroxeter.

10.—Comprising the Township of Hay.

11.—Comprising the Township of Stephen.

COUNTY OF KENT.

1.—The First Division Court to consist of the Town of Chatham and that part of the Township of Dover East and West to the south of the 12th and 13th concession line of the Township of Dover East; and that part of the Township of Chatham south of the 12th and 13th concession line, and west of the side road between lots 12 and 13, from the first mentioned 12th and 13th concession line to the 5th and 6th concession line, and all south of the said 5th and 6th concession line of said Township; that part of the Township of Harwich, north of 5th and 6th concession line by the eastern boundary; that part of the Township of Raleigh north of the 16th concession to the west side road between lots 12 and 13 north to the 6th and 7th concession line, and all of the said Township north of the said last mentioned line, and that part of the Township of Tilbury East, north of the 4th concession.

2.—The Second Division to consist of that part of the Township of Howard south of the 2nd and 3rd concession line by the eastern boundary (known as the Botany Road) and that part of the Township of Orford, south of the 10th and 11th concession line of said Township.

3.—The Third Division to consist of all that part of the Gore of Camden, lying west of the 10th and 11th concession line, and that part of the Township of Camden lying west of the side line, between lots 6 and 7; the Village of Dresden, and that part of the Township of Chatham, north of the 5th and 6th concession line, and east of the side-road between lots 12 and 13.

4.—The Fourth Division to consist of that part of the Township of Harwich south of the 5th concession of the eastern boundary, and south of the third concession by the western boundary, and that part of Raleigh south of the 15th concession and east of the side road between lots 12 and 13, and the road to the lake shore through lot 146 on the Talbot road.

5.—The Fifth Division to consist of the Village of Wallaceburg, the Gore of Chatham, and that part of the Township of Chatham, north-west of the 12th and 13th concession line and west of the side road, between lots 12 and 13, and that part of Dover East, lying north of the 12th and 13th concession side-road.

6.—The Sixth Division to consist of that part of the Township of Howard, north of the Botany Road aforesaid, and of that part of the Township of Orford, north of the 10th and 11th concession line, the Township of Zone, the Town of Bothwell, the Village of Thamesville, and that part of the Gore of Camden, east of the 10th and 11th concession line, and that part of the Township of Camden, east of the side line between lots 6 and 7.

7.—The Seventh Division to consist of that part of Tilbury East, south of the 3rd concession, the Township of Romney, and that part of the Township of Raleigh, south of the 6th and 7th concession line and west of the side road, between lots 12 and 13, in the said Township, and the road through lot 147, on Talbot road.

COUNTY OF LAMBTON.

1.—The external boundaries of the Township of Sarnia.

2.—The external boundaries of the Township of Warwick.

3.—The external boundaries of the Townships of Euphemia and Dawn.

4.—The external boundaries of the Township of Sombra.

5.—The external boundaries of the Township of Plympton.

6.—The external boundaries of the Township of Bosanquet.

7.—The external boundaries of the Township of Moore.

8.—The external boundaries of the Township of Enniskillen.

9.—The external boundaries of the Township of Brook.

COUNTY OF LANARK.

1.—The Townships of Drummond, Bathurst, South Sherbrooke, Burgess North, and that part of the Township of Elmsley North, north of the Rideau River, within the County of Lanark and west of lot No. 12, in each concession.

2.—The Townships of Lanark, Dalhousie, Darling, Lavant and North Sherbrooke.

3.—The Township of Beckwith, and the first six lots in the first seven concessions of the Township of Ramsay.

4.—The Township of Montague, and that part of the Township of North Elmsley, from lot No. 1 to lot No. 12, in each concession, both inclusive.

5.—The Township of Pakenham.

6.—The Township of Ramsay, with the exception of the first six lots on the first seven concessions of the said township.

UNITED COUNTIES OF LEEDS AND GRENVILLE.

1.—To consist of the 1st, 2nd, 3rd, 4th, 5th, 6th and 7th concessions and broken front of the Township of Elizabethtown, and the concession roads between them.

2.—To consist of the 1st, 2nd, 3rd, 4th and 5th concessions, and broken front, and that part of the 6th, 7th and 8th concessions from the town line of Edwardsburgh, to lot number 18; inclusive, of the Township of Augusta, and the concession roads between them.

3.—To consist of the 1st, 2nd, 3rd, 4th and 5th concessions and broken front of the Townships of Leeds and Lansdowne, respectively, and the concession roads between them.

4.—To consist of the Township of South Gower, the Township of Oxford, from the west side line of lot numbers 11 in all the concessions of the eastern boundary of the township, and the gore of land between South Gower, Oxford and Edwardsburgh.

5.—To consist of the Township of Wolford (except the 7th and 8th concessions and the allowance of road between them), lots numbert 1 to 10 inclusive in the 1st, 2nd, 3rd,

4th, 5th, 6th, 7th and 8th concessions of the Township of Oxford, and the allowance of roads within and between them.

6.—To consist of the Townships of Bastard and Burgess, and those parts of the Township of Leeds and Lansdowne, on the north side of the rear of the 5th concession in each, respectively.

7.—To consist of the Townships of Kitley and Elmsley,

8.—To consist of the Townships of North Crosby and South Crosby.

9.—To consist of that part of the Townships of Escott and Yonge, in rear of the 4th concession of Yonge, and in the rear of the 6th concession of Escott; that part of the Township of Elizabethtown, in rear of the 7th concession, and west of lots number 18 in the 8th, 9th, 10th and 11th concessions, and the allowances for roads embraced therein.

10.—To consist of the Township of Edwardsburgh.

11.—To consist of that part of the Township of Augusta, in rear of 5th concession, and west of lots numbers 18 in the 6th, 7th and 8th concessions; the whole of the 9th and 10 concessions of the Township of Augusta; the Gore between the Townships of Oxford, Wolford and Augusta; that part of the Township of Elizabethtown in rear of the 7th concession, and east of the commons, between lots numbers 18 and 19 in the 8th, 9th and 10 concessions; the 7th and 8th concessions of the Township of Wolford; lots numbers 1 to 10, inclusive, in the 9th and 10th concessions of the Township of Oxford; and the allowances for roads embraced therein.

12.—To consist of the 1st, 2nd, 3rd and 4th concessions and broken front of the Township of Yonge; the 1st, 2nd, 3rd, 4th, 5th and 6th concessions and broken front of the Township of Escott, and the allowances for roads embraced therein.

The said 1st, 2nd, 3rd and 12 divisions shall, respectively, embrace and comprehend within their limits those portions of the River St. Lawrence, and Islands therein, within the exterior side lines of which such portions of said river and islands would lie and be, if such exterior side lines were produced and extended in that direction to the utmost limits of the Province.

COUNTY OF LENNOX AND ADDINGTON.

1.—The Town of Napanee; Township of Richmond; all that part of North Fredericksburg and Adolphustown lying north of Hay Bay; and all that part of North Fredericksburg lying north of Big Creek.

2.—Comprises 1st concession of Ernesttown, the Village of Bath, the Township of Amherst Island, and the 2nd, 3rd, and 4th concessions of the said Township of Ernesttown, from the west limits thereof to the west limit of lot No. 21, in each concession.

3.—Township of South Fredericksburgh and all that part of North Fredericksburgh and Adolphustown, not included in Division No. 1.

4.—1st, 2nd and 3rd concessions of the Township of Camden, and the Village of Newburgh.

5.—All that part of the Township of Camden, not included in Division No. 4.

6.—All that part of the Township of Ernesttown, not included in the limits of Division No. 2.

7.—Townships of Sheffield, Kalador, Anglesea, Abinger, Effingham and Denbigh.

COUNTY OF LINCOLN.

1.—The Town and Township of Niagara.

2.—The Township of Grantham, (including the City of St. Catharines, the Villages of Merritton and Port Dalhousie), and the Township of Louth.

3.—The Townships of Caistor and Gainsborough, and the 9th concession of the Township of Grimsby, including the 1st and 2nd ranges as part of the said concession.

4.—The Villages of Grimsby and Beamsville; the Township of Clinton and the Township of Grimsby, except the 9th concession and the 1st and 2nd included as part of the said 9th concession.

COUNTY OF MIDDLESEX.

1.—That part of the City of London lying to the west of Maitland street, with that portion of the Township of London lying south of the line between the 4th and 5th concessions and west of the said street, produced northerly or a line in the same direction to the line between the said 4th and 5th concessions, and with that portion of the Township of Westminster lying west of the main road leading south from Clarke's Bridge, across the Thames; south to the line between the 1st and 2nd concessions; and westerly to the line between lots 42 and 43, and extending northerly to the River Thames; and also including the Village of London West.

2.—The Villages of Parkhill and Ailsa Craig, the Townships of East Williams and West Williams, and that portion of the Township of Lobo, lying north of the line between the 11th and 12th concessions; and east of the line between lots numbers 12 and 13.

3.—The Townships of McGillivray and Biddulph, and the Village of Lucan.

4.—The Township of Delaware, with that portion of the Township of Westminster west of the line between lots 30 and 31, in the 2nd concession; then southerly on the line between lots 20 and 21, to the southerly limit of the Township, including all west of said line; and also including all that portion of the front of said Township of Westminster, lying west of the line between lots number 42 and 43, not included in the first division; with that portion of the Township of Caradoc lying south of the line, between the 5th and 6th concessions, to the River Thames; and with that portion of the Township of Lobo, lying south of the line, between the 6th and 7th concessions, to the River Thames.

5.—The Townships of Ekfrid and Mosa, including the Villages of Wardsville, Newbury and Glencoe.

6.—The Townships of Adelaide and Metcalf; the Town of Strathroy, with that portion of the Township of Caradoc lying north of the line, between the 3rd and 4th conces-

sions; with that portion of the Township of Lobo which lies north of the 6th concession, and west of the line between lots 12 and 13 of the said Township.

7.—The Township of North Dorchester, north and south of the River Thames; that portion of the Township of West Nissouri which lies south of the line between lots 14 and 15; and with that portion of the Township of Westminster lying south of the line between the 1st and 2nd concessions, and east of the line between lots 30 and 31 in the second concession, and thence east of the line between lots 20 and 21, continued south to the southerly limit of the said Township of Westminster.

8.—All that portion of the Township of London, which lies north of the line between the 4th and 5th concessions; that portion of the Township of Lobo, which lies north of the line between the 6th and 7th concessions, and east of the line between lots 12 and 13, to the line between the 11th and 12th concessions, and with all that portion of the Township of West Nissouri which lies north of the line between lots number 14 and 15.

9.—That part of the City of London lying east of Maitland street; that part of the Township of London lying south of the line between the 4th and 5th concessions, and east of the said street, produced northerly or in a line in the same direction to the line between the said 4th and 5th concessions; and that part of the Township of Westminster lying north of the line between the 1st and 2nd concessions, and east of the main road leading south from Clark's Bridge, across the Thames.

DISTRICT OF MUSKOKA.

1.—The Village of Bracebridge, and the Townships of Macaulay, McLean, Ridout, Monck and Cardwell, concessions 1,2,3,4,5,6,7, 8 and 9, in the Townships of Stephenson, Bruce and Franklin, and that part of the Township of Watt, situated east of lot 21, in the several concessions thereof; and concessions 7, 8, 9, 10, 11, 12 and 13, in the Townships of Muskoka and Draper.

2.—The Village of Gravenhurst; the Townships of Morrison, Ryder and Oakley, and concessions 1, 2, 3, 4, 5 and 6, of the Townships of Muskoka and Draper.

3.—The Village of Huntsville; the Townships of Stisted, Chaffey and Sinclair; and concessions 10, 11, 12, 13 and 14, in the Townships of Stephenson, Brunel and Franklin.

4.—The Townships of Wood, Medora and Humphrey, and that part of the Township of Watt, situated west of lot 21, in the several concessions thereof.

DISTRICT OF NIPISSING.

1.—To be composed of the Townships of Springer, Field, Badgerow, Caldwell, Kirkpatrick, Hugel, Rattler, Dunnet, Hagar and Appleby, and all that part of the District of Nipissing which is situated west of the line between the Indian Reserve and the Township of Widdifield, produced, north and south, to the boundary of the said district and east of the eastern boundary of the fourth division.

2.—To be composed of the Townships of Mattawan, Olrig, Calvin, Papineau, Lauder, Pentland, Boyd, Osler, McLaughlin, Canisbay, Sabine, Lyell, Airy, Murchison and Robinson, and all that part of the District of Nipissing situated east of the line between the Townships of Bonfield and Calvin, produced, south to the provisional County of Hali-

burton, and east of the line between the Townships of Phelps and Olrig, produced, north to the Ottawa River.

3.—To be composed of the Township of Widdifield, Merrick, Mulock, Phelps, Ferris, Bonfield, Boulter, Chisholm, Ballantyne, Wilkes, Biggar, Paxton, Butt, Devine, Hunter, McCraney, Finlayson, Peck, and all that part of the District of Nipissing situated west of the line between the Townships of Phelps and Olrig, produced, north to the Ottawa River and east of the eastern boundary of first division.

4.—To be composed of the Townships of McKim, Neelon, Dryden, Awrey, Hawley, Blizard, and all that part of the District of Nipissing which is situated west of the line between the said Township of Awrey and the Township of Hagar, produced, north and south to the boundary of the said district.

COUNTY OF NORFOLK.

1.—The Gore of the Township of Woodhouse, and all that part of said Township lying west of the side line between lots 5 and 6, together with that part of the 4th, 5th and 6th concessions lying west of the side line, between lots 12 and 13, including that part of the Town of Simcoe within the same.

2.—The Township of Townsend.

3.—The Township of Windham.

4.—The Township of Middleton.

5.—The Township of Charlotteville.

6.—The Township of Walsingham.

7.—The Township of Houghton.

8.—All that part of the Township of Woodhouse, not included in Division No. 1, viz.: all that part of the 1st, 2nd and 3rd concessions lying east of the side line, between lots 5 and 6, and that part of the 4th, 5th and 6th concessions, lying east of the said line, between lots Nos. 12 and 13 in said Township.

UNITED COUNTIES OF NORTHUMBERLAND AND DURHAM.

1.—Townships of Cartwright and Darlington, and Town of Bowmanville.

2.—Township of Clarke and Village of Newcastle.

3.—Township of Hope and Town of Port Hope.

4.—Townships of Cavan, Manvers, South Monaghan and Village of Millbrook.

5.—Township of Hamilton and Town of Cobourg.

6.—Townships of Haldimand and Alnwick.

7.—Township of Cramahe and Village of Colborne.

8.—Township of Brighton and Village of Brighton.

9.—Township of Percy and Village of Hastings.

10.—Township of Murray.

11.—Township of Seymour and Village of Campbellford.

COUNTY OF ONTARIO.

1.—Including the Townships of Whitby and East Whitby and the Towns of Whitby and Oshawa.

2.—The Township of Pickering.

3.—The Townships of Reach and Scugog, and the Village of Port Perry.

4.—The Townships of Uxbridge and Scott, and the Town of Uxbridge.

5.—The Township of Brock and the Village of Cannington.

6.—The Township of Thorah, and all that part of the Township of Mara, lying south of the line, between the 4th and 5th concessions.

7.—All that part of the Township of Mara, lying north of the line, between the 4th and 5th concessions thereof, and the Township of Rama.

COUNTY OF OXFORD.

1.—Comprises the Town of Woodstock, the Townships of Blanford, East Zorra, East Oxford, and that part of the Township of North Oxford, situated east of lot 16, and that part of West Oxford, lying east of lot No. 7, to the Stage Road, thence on the north side of the Stage Road, to where the said road intersects the Township of East Oxford.

2.—Comprises the Township of Blenheim.

3.—Comprises the Township of West Zorra and East Nissouri.

4.—Comprises the Townships of North Norwich and South Norwich and the Village of Norwich.

5.—Comprises all those portions of the Townships of North Oxford and West Oxford, not comprised in the 1st Division; the Town of Ingersoll, and those portions of the 1st and 2nd concessions of the Township of Durham, west of the Middle Town line.

6.—Comprises the Town of Tilsonburg, and all that portion of the Township of Durham, not included in the 5th Division.

DISTRICT OF PARRY SOUND.

1.—The Village of Parry Sound, and the Townships of Foley, McDougall, Cowper and Darling, and all that portion of the District lying to the west of the east boundary of Carling, produced to the French River.

2.—The Townships of McKellar, Croft, Hagarman, Ferguson, and all that portion of the district lying between the east boundary of Ferrie, and the west boundary of Ferguson, produced to the French River.

3.—The Townships of Humphrey, Christie, Monteith and Conger.

4.—Townships of McMurrich, Perry and Armour.

5.—Townships of Spence, Chapman, Ryerson, Strong, and the Townships east of Strong, and all that portion of the district lying to the east of the west boundary of Chapman, produced to the French River.

COUNTY OF PEEL.

1.—Town of Brampton, Township of Chinguacousy and northern division of Township of Toronto Gore.

2.—Village of Streetsville, Township of Toronto, and southern division of Township of Toronto Gore.

3.—Township of Caledon.

4.—Village of Bolton, Township of Albion.

COUNTY OF PERTH.

1.—To consist of all that part of the Township of North Easthope, west of the line between lots 25 and 26, and south of the road between the 8th and 9th concessions, and all that part of the Township of South Easthope, west of the side line, between lots 25 and 26; all that part of the Township of Downie and Gore, north and east of the concession line, between the 10th and 11th concessions and the Oxford road; and all the Township of Ellice, from the 1st to the 13th concessions inclusive.

2.—To consist of all that part of the Township of Fullarton, not included in Division No. 3, and the Townships of Hibbert and Logan.

3.—To consist of that portion of the Township of Downie, west of the Oxford road, and south of the concession line between the 10th and 11th concessions; the Township of Blanchard; all that part of the Township of Fullarton, comprising the 13th and 14th concessions, and south of a road leading from the Mitchell road, between lots 24 and 25, east to lot 3 in the 10th concession; thence east along the line between the 10th and 11th concessions to the town line.

4.—To consist of that part of the Township of North Easthope, east of the line between lots 25 and 26, and north of the 8th concession, inclusive, with the 9th and 10th

concessions ; all that part of the Township of South Easthope, not included in Division No. 1.

5.—To consist of the Township of Mornington, and all that part of the Township of Elma, from lots No. 53 to 72, both numbers inclusive, of the first concession, and from lots No. 27 to No. 36, both numbers inclusive, in and from the second to the eighteenth concessions, both concessions inclusive, of said Township of Elma ; and concessions 14, 15, and 16 of the Township of Ellice, and concessions 11th, 12th, 13th and 14th of the Township of North Easthope.

6.—To consist of the Township of Wallace, and all that part of the Township of Elma, from the 1st concession to the 18th concession, both concessions inclusive, and comprising lots Nos. 1 to 52, both inclusive. of the 1st concession, and lots No. 1 to No. 26 inclusive, from the 2nd to the 18th concessions, both concessions inclusive.

COUNTY OF PETERBOROUGH.

1.—Composed of the Town of Peterborough, the Village of Ashburnham, the Townships of North Monaghan and Ennismore, and all that part of the Township of Harvey, lying west of Pigeon Lake and south of Bobcaygeon ; and all the Township of Smith, lying south of the 7th concession ; and all the Township of Otonabee, lying west of the 8th concession, and north of lots 21 from the said 8th concession to the western boundary of said Township of Otonabee ; and all the Township of Douro, lying south of lots numbered 11 ; and that part of the Township of Dummer, lying south of lots numbered 11 and west of the 5th concession.

2.—Composed of the Townships of Asphodel, Belmont and Methuen, and that part of the Township of Dummer, lying east of the 4th concession and south of lots numbered 11.

3.—Composed of all that part of the Township of Otonabee lying east of the 9th concession ; and all that part of said Township of Otonabee, lying south of lots numbered 22, and west of the 8th concession.

4.—Composed of all that part of the Township of Smith, lying north of the 6th concession ; and all that part of the Township of Douro, lying north of lots numbered 10 ; and all that part of the Township of Dummer, lying north of lots numbered 10 ; and also of the Village of Lakefield, and of the Township of Galway ; and all the Township of Harvey, except that portion lying west of Pigeon Lake, and south of Bobcaygeon.

5.—Composed of the Townships of Burleigh, Cavendish, Anstruther and Chandos.

UNITED COUNTIES OF PRESCOTT AND RUSSELL.

1.—Comprises the whole of the Township of Longueuil, the municipality of the Village of L'Orignal, and the first concession of the Township of Caledonia.

2.—Comprises all that part of the Township of West Hawkesbury, extending from the front of the third concession, to the rear of the said township.

3 Comprises the whole of the Township of East Hawkesbury.

4.—Comprises the Township of North Plantagenet, and that part of the Township of South Plantagenet, lying north of the Nation River.

5.—Comprises the whole of the Township of Cumberland.

6.—Comprises the whole of the Township of Russell.

7.—Comprises the two front concessions of the Township of West Hawkesbury, and the municipality of Hawkesbury Village, within the same

8.—Comprises the Township of Caledonia (excepting the 1st concession of the said township), and also that portion of the Township of South Plantagenet, lying south and east of the Nation River.

9.—Comprises the whole of the Township of Alfred.

10.—Comprises the whole of the Township of Clarence.

11.—Comprises the whole of the Township of Cambridge.

COUNTY OF PRINCE EDWARD.

1.—The Town of Picton, the 2nd and 3rd concessions "Military Tract," from the west line of lot No. 13, eastward; Gore "G"; 1st and 2nd concession north of the Carrying Place; 1st concession south-east of the Carrying Place, and 2nd concession north of Black River, including Gore "K" and "L" and McCan Gores, all in the Township of Hallowell; Block "I" the concessions north and east of East Lake and Gore "B," in the Township of Athol, and the 1st and 2nd concessions south of the Bay of Quinte, and Gore "A," in the Township of North Marysburgh, and 1st concession south-west of Green Point, to the end of Carman's Point in Sophiasburg.

2.—The Township of South Marysburgh, and the southern part of Athol, commencing at the outlet of East Lake, thence down to the head of the lake, thence down to the base line between the 1st concession south and the 1st concession north of East Lake, till it strikes the Township line of Hallowell, thence down said Township line till it strikes South Marysburgh.

3.—The Township of Sophiasburg, together with Big Island, excepting the 1st concession south-west of Green Point to the end of Carman's Point.

4.—All that part of the Township of Ameliasburgh lying east of the line between lots Nos. 86 and 87, in the 1st, 2nd, 3rd and 4th concessions of said Township, including Huff's Island.

5.—That part of the Township of Hillier, not included in the 7th Division, also the 1st and 2nd concessions north of West Lake, and west of lot No. 7 in the said concession, and that part of Irwin Gore lying north of and west of lot No. 7 in the 2nd concession, and the west part of the 2nd concession produced west of lots No. 74, in that concession in the Township of Hallowell.

6.—Block (IV.) four, concession south side of West Lake, 1st concession "Military Tract," 2nd and 3rd concessions of said Tract west of lots No. 13 in those concessions, Gore "E," 1st and 2nd concessions north of West Lake and east of lot No. 6 in those

concessions; the Gerrow Gore and that part of Irwin Gore not included in Division No. 5, and all that part of the 2nd concession produced east of lot No. 75 in the Township of Hallowell.

7.—All that part of the Township of Ameliasburgh, lying west of the line between lots Nos. 86 and 87, in the 1st, 2nd, 3rd and 4th concessions of said Township; all that part of the 4th and 5th concessions of the Township of Hillier, west of the line between lots Nos. 86 and 87, and the 3rd concession west of the line between lots Nos. 22 and 23, with that part of the 2nd concession, lying north of Pleasant Bay, in the said Township of Hillier.

8.—All the point lying east of the west line of Martsland's Gore, the concession north Smith's Bay and Waupoos Island in the Township of North Marysburgh.

DISTRICT OF RAINY RIVER.

1.—That part of the District composed of the territory to the north of the south-easterly shore of the Lake of the Woods, and a line drawn in a north-easterly direction from Rat Portage to the north end of Lake Manitou; thence in an easterly direction to the south end of the lake known as the lake where the river bends; thence in an easterly direction to a point where the said meridian of the most easterly part of Hunter's Island intersects the Canada Pacific Railway at the south-west angle of Hawk Lake.

2.—The territory lying south and east of the Lake of the Woods, and of the said line.

COUNTY OF RENFREW.

1.—Comprising the Town of Pembroke, the Townships of Pembroke, Stafford, Alice, Petewawa, Buchanan, Rolph, Wylie, McKay, Fraser, Head, Clara and Maria, and all that part of the Township of Wilberforce from the 18th to the 25th concessions, both inclusive; and also all those parts of the 14th, 15th, 16th and 17th concessions of same Township of Wilberforce, lying north of Snake River and east of Lake Doré.

2.—Comprising all that part of the Township of Westmeath, lying east and north of the Muskrat Lake and River, and all those parts of the Township of Ross, from the 5th to the 9th concessions, both inclusive, east of Muskrat Lake, and from the 7th to the 13th (of the other) concessions of Ross, both inclusive, of the said Township of Ross.

3.—Comprising the Village of Renfrew, and the Townships of Horton and Admaston.

4.—Comprising the Village of Arnprior and the Township of McNab.

5.—Comprising the Townships of Bagot, Blythfield, Brougham and Metawatchan.

6.—Comprising the Townships of Grattan, Sebastopol, South Algona, North Algona, and all that part of the Township of Wilberforce, from the 1st to the 17th concessions, both inclusive, excepting those parts of the 14th, 15th, 16th and 17th concessions of same Township of Wilberforce lying north of Snake River and east of Lake Doré.

7.—Comprising the Township of Bromley, and all that part of the Township of Westmeath, west of Muskrat Lake, and all those parts of the Township of Ross, from the 1st

to the 4th concessions, both inclusive, east of Muskrat Lake, and from the 1st to the 6th of the other concessions, both inclusive, of the said Township of Ross.

8.—Comprising the Townships of Brudenell, Radcliff, Raglan, Lyndoch, Griffith, Hagarty, Sherwood, Jones, Richards and Burns.

COUNTY OF SIMCOE.

1.—Comprising the Town of Barrie, the township Vespra, except that portion lying west of the Nottawasaga River, and excepting also lots Nos. 38, 39 and 40, in the 1st and 2nd concessions, and lots Nos. 1, 2, and 3, in the 3rd, 4th, 5th, 6th and 7th concessions, respectively. That portion of the Township of Oro, lying south of lots Nos. 21, in the 1st and 2nd concessions (including the Ranges), and south of lots Nos. 13, in the 3rd, 4th, 5th, 6th, 7th and 8th concessions, respectively; that portion of the Township of Innisfil, lying east of lots Nos. 5, in the 6th, 7th and 8th concessions, and that portion lying north of the 8th concession; that portion of the Township of Essa, lying north of lots Nos. 19, in the 7th, 8th, 9th, 10th and 11th concessions.

2.—The Village of Bradford; the Township of West Gwillimbury, excepting thereout lots Nos. 1, 2, 3, 4 and 5, in the 14th and 15th concessions; the Township of Innisfil, except that portion lying north of the 5th concession, and excepting also lots Nos. 1, 2, 3, 4 and 5, in the 1st, 2nd, 3rd, 4th and 5th concessions.

3.—The Township of Tecumseth, except concessions 12, 13, 14 and 15; the Township of Adjala, except that portion lying north of lots Nos. 25, in the 8th concession thereof.

4.—The Town of Collingwood, the Village of Stayner, that portion of the Township of Nottawasaga, lying north of lots Nos. 18, in the twelve concessions thereof; that portion of the Township of Sunnidale, lying north of the 8th concession; that portion of the Township of Flos, lying west of the Nottawasaga river; the Islands in Lake Huron contiguous to the Township of Nottawasaga.

5.—The Township of Flos, except that portion lying west of the Nottawasaga river; the Township of Medonte, except that portion lying east of the 10th concession, and north of lots Nos. 10, in the 9th and 10th concessions, respectively; that portion of the Township of Oro, lying north of the southern boundaries of lots Nos. 21, in the 1st and 2nd concessions, and north of the southern boundaries of lots Nos. 13, in the 3rd, 4th, 5th, 6th, 7th and 8th concessions, respectively; lots Nos. 38, 39 and 40, in the 1st and 2nd concessions, and lots Nos. 1, 2 and 3 in the 3rd, 4th, 5th, 6th and 7th concessions of the Township of Vespra.

6.—The Town of Orillia, the Township of Orillia, southern division, the Township of Orillia, northern division, except that portion lying north of lots Nos. 15 in the first seven concessions thereof; that portion of the Township of Oro lying east of the 8th concession; that portion of the Township of Medonte, being composed of lots Nos. 1 to 6 (both inclusive) in the 11th, 12th, 13th and 14th concessions; the Islands in Lake Simcoe contiguous to the townships and portions of townships above described lying wholly or for the most part opposite thereto.

7.—The Township of Nottawasaga, except that portion lying north of lots Nos. 18, in the 12 concessions thereof; the Township of Sunnidale, except that portion lying north of the 8th concession; that portion of the Township of Vespra, lying west of the Nottawasaga river; that portion of the Township of Essa, lying north of lots Nos. 19, in

the 1st, 2nd, 3rd, 4th, 5th and 6th concessions; that portion of the Township of Tossorontio, lying north of lots Nos. 20, in each of the seven concessions thereof.

8.—The Township of Essa, except that portion lying north of lots Nos. 19, in each of the 11 concessions thereof; the Township of Tossorontio, except that portion lying north of lots Nos. 20, in each of the seven concessions thereof; that portion of the Township of Innisfil, being composed of lots Nos. 1, 2, 3, 4 and 5, in the 1st, 2nd, 3rd, 4th 5th, 6th, 7th and 8th concessions; the 12th, 13th, 14th and 15th concessions of the Township of Tecumseth; lots Nos. 1, 2, 3, 4 and 5, in the 14th and 15th concessions of the Township of West Gwillimbury; that portion of the Township of Adjala, lying north of lots Nos. 25, in the eight concessions thereof.

9.—The Town of Penetanguishene, and the Village of Midland, the Township of Tiny; that portion of the Township of Tay, lying west of the 8th concession; the islands in Lake Huron contiguous to the Township of Tiny, and to that part of the Township of Tay, forming part of the ninth division, and lying wholly, or for the most part, opposite thereto.

10.—The Township of Matchedash, that portion of the Township of Orillia, northern division, lying north of lots Nos. 15, in the first seven concessions thereof; that portion of the Township of Medonte, lying north of lots Nos. 6 in the 11th, 12th, 13th and 14th concessions, and that portion lying north of lots Nos. 10, in the 9th and 10th concessions thereof; the Township of Tay, except that portion lying west of the 8th concession; the Island in Lake Huron, contiguous to that part of the Township of Tay, forming part of the 10th division, and lying wholly, or for the most part, opposite thereto.

NOTE.—Each of the said several Divisions shall include all allowances for roads embraced within its external limits, and shall also extend to the centre of every allowance for road lying external and adjacent to every such Division, excepting always where any such last-mentioned allowance is hereinbefore declared to belong to or form part of any particular Division.

UNITED COUNTIES OF STORMONT, DUNDAS AND GLENGARRY.

1.—Township of Charlottenburg, in the County of Glengarry.

2.—Township of Lochiel, in the County of Glengarry.

3.—Town and Township of Cornwall, in the County of Stormont.

4.—Township of Osnabruck, in the County of Stormont.

5.—Township of Williamsburgh, in the County of Dundas.

6.—Township of Matilda, in the County of Dundas.

7.—Township of Mountain, in the County of Dundas.

8.—Township of Finch, in the County of Stormont.

9.—Township of Lancaster, in the County of Glengarry.

10.—Township of Winchester, in the County of Dundas.

11.—Township of Roxborough, in the County of Stormont.

12.—Township of Kenyon, in the County of Glengarry.

DISTRICT OF THUNDER BAY.

1.—All that part of the District lying west of the meridian of 87 degrees of west longitude, to the meridian of the most easterly part of Hunter's Island, excepting therefrom the Municipality of Neebing.

2.—

3.—Comprising the Municipality of Neebing.

COUNTY OF VICTORIA.

1.—The first consists of the following townships and parts of townships, viz. : of the 15th concession of the Township of Mariposa, and the Township of Eldon, except the ranges north and south of Portage Road.

2.—The second consists of the following Townships : all of the Townships of Fenelon, except that portion lying east of the Scugog River, and south of Sturgeon Lake, and the Township of Summerville.

3.—The third consists of the Township of Verulam.

4.—The fourth consists of the Township of Emily.

5.—The fifth consists of the Town of Lindsay, Township of Ops, and that portion of the Township of Fenelon, lying east of the Scugog River, and south of Sturgeon Lake.

6.—The sixth consists of the Township of Mariposa, except the 15th concession.

7.—The seventh consists of the Townships of Carden and Dalton, Laxton, Digby and Longford, and the Township of Bexley, and that portion of the Township of Eldon north of Portage Road, and the Range south of Portage Road.

COUNTY OF WATERLOO.

1.—All that portion of the Township of Waterloo, lying north of the Block line on the west side of the Grand River, and that part of the Upper Block of said Township, lying on the east side of the Grand River, north of lots Nos. 115, 109, 104, 86 and 95 to the Guelph Township line, including the Towns of Berlin and Waterloo.

2.—All that part of the Township of Waterloo, lying south of the Block Line, on the west of the Grand River, and that part lying on the east side of the Grand River, south of the northern boundary of lots Nos. 115, 109, 104, 86 and 95, to the Guelph township line, including the Villages of Preston and Hespler.

3.—All that part of the Township of North Dumfries, lying east of lot No. 19, in the 7th concession, and running a course with the eastern boundary of the said lot in a northerly direction up to the 12th concession; thence along the eastern boundary of lot No. 23, in the said 12th concession, to the township line, including the Town of Galt.

4.—All that part of the Township of North Dumfries lying west of lot No. 18, in the 7th concession; thence along the western limits of said lot No. 18, the same course thereof, in a northerly direction to the 12th concession; thence along the westerly limit of lot No. 22 to the township line, including the Village of Ayr.

5.—The Township of Wilmot, including the Village of New Hamburg.

6.—The Township of Wellesley.

7.—The Township of Woolwich.

COUNTY OF WELLAND.

1.—Comprising the Township of Crowland; that part of the Township of Thorold, lying south of the line between lots 178 and 195, running through to Pelham; that part of Pelham, lying south of the 4th concession, and that part of Humberstone, lying north of the concession line, between the 4th and 5th concessions, being the whole of the 5th concession and the Town of Welland.

2.—Comprising the Township of Wainfleet.

3.—Comprising the Township of Bertie, and those parts of the Township of Humberstone not included in Nos. 1 and 6, and the Village of Fort Erie.

4.—Comprising the Township of Willoughby, the Village of Chippewa, and that part of the Township of Stamford, south of the line between lots 136 and 137; easterly from the western limit of the Township to the south-east angle of lot No. 133; thence north on the line between lots Nos. 132 and 133, to the northern boundary of the township, including the Town of Clifton and Navy Island.

5.—Comprising those parts of the Township of Stamford, Thorold and Pelham, not included in any other Division, and the Town of Thorold.

6.—Comprising all the Township of Humberstone, lying south of the 5th concession and west of the side-lines, between lots Nos. 9 and 10 in the several other concessions thereof, and the Village of Port Colborne.

COUNTY OF WELLINGTON.

1.—The Town and Township of Guelph.

2.—The Township of Puslinch.

3.—The Township of Eramosa.

4.—Consisting of the Township of Nicol, except the 11th and 12th concessions; the Municipality of Fergus; the first eight concessions of the Township of Garafraxa, and lots 1 to 18, both inclusive, in concessions A and B of the Township of Peel, lots 13, 14, 15, 16, 17 and 18, in concesions 18 and 19, and lots 19, 20 and 21 in the 17th concession of the Township of Peel.

5.—The Township of Erin.

6.—Consisting of the Township of Pilkington and the 11th and 12th concessions of the Township of Nicol; the Municipality of the Village of Elora; and lots numbers 19 and upwards, belonging to the 9th, 10th, 11th, 12th, 13th, 14th, 15th and 16th concessions of Peel.

7.—Consisting of the first seven concessions of the Townships of Peel and Maryboro'.

8.—Consisting of that part of the Township of Arthur, south and south-east of lot 15, on the west side of the Owen Sound Road; lot 16 on the Owen Sound Road, and lot 12 east of the Owen Sound Road, in the Township of Arthur; that part of the Township of Luther, from lots 1 to 16, both inclusive; and lots 1 to 12, both inclusive, of the 17th and 18th concessions of the Township of Peel; lots 5 to 11, both inclusive, of the 19th concession of said Township of Peel; and lots 19 to 23, both inclusive, of concessions "A" and "B," of said Township of Peel.

9.—The territory formerly comprised in this Division is now in the County of Dufferin.

10.—Consists of the Township of Minto.

11.—Consists of the Town of Mount Forest, and that part of the Township of Arthur north of lot 16, west of the Owen Sound Road; lot 17, on the Owen Sound Road, and lot 13, east of the Owen Sound Road.

12.—Consists of concessions 8 to 17, both inclusive, of the Township of Maryboro'; and concessions 8 to 16, both inclusive, of the Township of Peel, except lots 19, 20, 21, 22 and 23 of those concessions in that Township.

COUNTY OF WENTWORTH.

1.—All that part of the Township of Barton lying east of the line between lots 14 and 15, and all that part of Hamilton City east of Hughson Street.

2.—The whole of the Township of Flamboro' West.

3.—The whole of the Township of Flamboro' East.

4.—The whole of the Township of Beverley.

5.—The whole of the Township of Saltfleet.

6.—The whole of the Township of Ancaster.

7.—The whole of the Township of Glanford.

8.—The whole of the Township of Binbrook.

9.—All that part of the Township of Barton lying west of the line between lots 14 and 15, and that part of Hamilton City west of Hughson Street.

COUNTY OF YORK

1.—The City of Toronto, east of Yonge Street.

2.—Concessions 5 to 11, inclusive, of the Township of Markham : and concessions 5 to 10 conclusive, of the Township of Whitchurch from 1 to 10, inclusive ; together with the Villages of Markham and Stouffville.

3.—Concessions 1 to 4, inclusive, of the Township of Markham ; and concessions 1 to 4, inclusive, of the Township of Whitchurch from lot 1 to 10, inclusive ; and concessions 1 to 3, inclusive, of the Township of Vaughan.

4.—The Township of Whitchurch, from the line between lots 10 and 11, northward ; and the Township of East Gwillimbury.

5.—The Townships of Georgina and North Gwillimbury.

6.—The Township of King and the Incorporated Village of Aurora.

7.—Concessions 4 to 11, inclusive, of the Township of Vaughan.

8.—All that portion of the Township of York lying west of Yonge Street, and the Township of Etobicoke.

9.—The Township of Scarboro', and all that portion of the Township of York which lies east of Yonge Street, and the Village of Leslieville.

10.—The City of Toronto west of Yonge Street.

DIVISION COURT TARIFF.

Fees to be received by the several Clerks and Bailiffs of Division Courts in Ontario from and after the first day of January, 1885 :—

FORM 133.

Schedule of Clerks' Fees.

1. Receiving claim, numbering and entering in Procedure Book..... $0 15
   (This item to apply to entering in the Procedure Book a transcript of judgment from another Court, but not an entry made for the issue of a judgment summons.)

2. Issuing summons, with necessary notices and warnings thereon, or judgment summons (as provided in the forms), in all,
   Where claim does not exceed $20 ..... 0 40
   " exceeds $20, and does not exceed $60..... 0 50
   " exceeds $60, and does not exceed $100 ..... 0 60
   " exceeds $100 ..... 1 00
   [*N. B.*—In replevin and interpleader suits the value of goods to regulate the fee.]

3. Copy of summons, including all notices and warnings thereon 0 20

4. Copy of claim (including particulars), when not furnished by plaintiff (to be paid by the plaintiff) 0 20

5. Copy of set-off (including particulars), when not furnished by the defendant (to be paid by the defendant) 0 20

6. Receiving and entering bailiff's return to any summons, writ or warrant issued under the seal of the Court (except summons to witness and return to summons, or papers from another Division) 0 15

7. Entering and noting every defence or notice of admission in Procedure Book .. 0 25
(To be paid in the first instance by the defendant or other person entering it, but it may be afterwards taxed against the plaintiff, should costs be given against him.)

8. Taking confession of judgment 0 10
(This does not include affidavit and oath chargeable under item 9.)

9. Every necessary affidavit, if actually prepared by the clerk, and administering oath to the deponent 0 25

10. Copies of papers for which no fee is already provided, necessarily required for service or transmission to the Judge—each 0 10

11. Every notice of defence or admission entered, or other notice required to be given by the Clerk to any party to a cause or proceeding, or to the Judge in respect to the same, and mailing 0 15

12. Entering final judgment by Clerk on special summons, where claim is not disputed 0 50

13. Entering every judgment rendered at the hearing or final order made by the Judge 0 50
(This one fee of 50 cents will include the service of recording at the trial, and afterwards entering in the Procedure Book, the judgment, decree and order in its entirety rendered or made at the trial. In a garnishee proceeding before judgment the fee of 50 cents will be allowed for the judgment in respect to the primary debtor, and a like fee of 50 cents for the adjudication, whenever made, in respect to the garnishee.)

14. Subpœna to witness 0 15
(The subpœna may include any number of names therein, and only one original subpœna shall be taxed, except the Judge otherwise orders.)

15. For every copy of subpœna required for service 0 05

16. Summons for each juryman when called by the parties 0 10
(Only 25 cents in all is to be allowed for returning a Judge's jury.)

17. Every order of reference or order for adjournment made at hearing, and every order requiring the signature of the Judge, and entering the same 0 25
(Any warning necessary with order—*e. g.*, the warning in form 42—forms part of the order.)

18. Transcript of judgment (under sections 161 or 165) 0 25

19. Every writ of execution, warrant or attachment, or warrant for arrest of delinquent, and delivering same to Bailiff 0 50

20. Renewal of every writ of execution when ordered by the judgment creditor .. 0 15

21. Every bond, when necessary, and prepared by the Clerk (including affidavit of justification) 0 50

22. For necessary entries in the Debt Attachment Book in each case (in all) 0 20

23. Transmitting transcript of judgment, or transmitting papers for service to another Division, or to Judge on application to him, including necessary entries, but not postage 0 25

24. Receiving papers from another Division for service, entering the same, handing to the Bailiff, receiving and entering his return, and transmitting the same if returns made promptly, not otherwise) 0 30
(This fee does not include a charge for receiving transcript of judgment, for which a fee of 15 cents is taxable under item 1.)

25. Search by person not party to the suit or proceeding to be paid by the applicant, 10 cents; search by party to the suit or proceeding, where service is over one year old 0 10
(No fee is chargeable for search to a party to the suit or proceeding, if the same is not over one year old.)

26. Taxing costs in defended suits 0 25

Rule No. 175 of the Rules of Practice of Division Courts.—On payment of a fee of 5 cents, every clerk, when required by parties paying costs, shall give a statement, in writing, of items in detail, or transmit the same by postal card.

FORM 134.

Schedule of Bailiffs' Fees.

1. Service of summons, writ or warrant issued under the seal of the Court, or Judge's summons on each person (except summons to witness and summons to juryman),
Where claim does not exceed $20 ..... 0 30
" exceeds $20, and does not exceed $60 ..... 0 40
" exceeds $60, and does not exceed $100 ..... 0 50
" exceeds $100 ..... 0 75
(In interpleader suits the value of the goods to regulate the fee.)

2. For every return as to service of summons, attending at the Clerk's office, and making the necessary affidavit (as provided by Rule 90) 0 15

3. Service of summons on witness or juryman, or service of notice 0 15

4. Taking confession of judgment, or attending to prove 0 10

5. For calling parties and their witnesses at the sittings of the Court in every defended case, as provided by Rule 91, amended by Rule 168 ..... 0 15

6. Enforcing every writ of execution, or summons in replevin, or warrant of attachment, or warrant against the body—each.
Where claim does not exceed $20 ..... 0 50
" exceeds $20, and does not exceed $60 ..... 0 75
" exceeds $60 ..... 1 00
(Executing summons in replevin includes service on defendant. The value of the goods to regulate the amount of the fee.)

7. Every mile necessarily travelled to serve summons or process, or other necessary papers, or in going to seize on attachment, or in going to seize on a writ of execution, where money made or case settled after levy 0 12
(In no case is mileage to be allowed for a greater distance than from the Clerk's office to the place of service or seizure.)

8. Mileage to arrest delinquent under a warrant to be at 12 cents per mile, but for carrying delinquent to prison, including all expenses, and assistance, per mile 0 20

9. Every schedule of property seized, attached, or replevied, including affidavit of appraisal, when necessary,
Not exceeding $20 ..... 0 30
Exceeding $20, and not exceeding $60 ..... 0 50
Exceeding $60 ..... 0 75

10. Every bond, when necessary, when prepared by the Bailiff (including affidavit of justification) 0 50

11. Every notice of sale not exceeding three, under execution or under attachment, each 0 15

12. There shall be allowed to the Bailiff for removing or retaining property seized under execution or attached, reasonable and necessary disbursements and allowances, to be first settled by the Clerk, subject to appeal to the Judge.

13. There shall be allowed to the Bailiff five per cent. upon the amount realized from the sale of property under any execution, but such percentage not to apply to any overplus thereon.
(But if execution be satisfied in whole or in part, after seizure and before sale, the Bailiff to be entitled to charge and receive three per cent. on the amount realized.)

CORRESPONDENCE, ETC.,

Relative to the Accounts between the Provinces of Ontario and Quebec and the Dominion of Canada.

Presented to the Legislative Assembly.

By Command,

A. S. HARDY,

Secretary.

PROVINCIAL SECRETARY'S OFFICE,
TORONTO, April 19th, 1887.

(*Mr. Gibson, Huron.*)

CORRESPONDENCE, ETC.,

RELATIVE TO THE ACCOUNTS BETWEEN THE PROVINCES OF ONTARIO AND QUEBEC AND THE DOMINION OF CANADA.

QUEBEC, 16th March, 1886.

The Honourable
THE TREASURER OF THE PROVINCE OF ONTARIO,
Toronto.

SIR,—I am directed to call your attention to the very considerable amount that is now owing to the Province of Quebec for interest on Quebec's share of collections made by the Province of Ontario on account of sales of Common School Lands, the amount of these collections having been retained by the Province of Ontario instead of having been paid into the hands of the Dominion as provided by the 9th clause of the Arbitration Award.

The exact amount of Quebec's share of these collections cannot be made up here until we are furnished with a statement, which has already been asked for, shewing what proportion of the collections made during the years 1883, 1884 and 1885 were on account of lands sold between the 14th June, 1853, and the 6th of March, 1861.

It is very important that we should have this statement as soon as it can possibly be furnished, and in the meantime I am directed to request that you will remit $75,000, if possible, on account of the interest due by Ontario on Quebec's share of the collections referred to above.

I have the honor to be, Sir,
Your obedient servant,

H. T. MACHIN,
Assistant Treasurer, P.Q.

TREASURY DEPARTMENT, ONTARIO,
TORONTO, 27th March, 1886.

To the Honourable
THE PROVINCIAL TREASURER,
Quebec.

SIR,—I am in receipt of your favor of the 16th inst., asking for statement of collections made on account of the Common School Fund during the years 1883, 1884 and 1885. I will bring your request under the notice of the Crown Lands Department, and ask them to supply you with the information desired.

In regard to your request for a remittance of $75,000, on account of the Common School Fund, the Government have come to the conclusion that it is desirable that no further payments on account of this fund be made until a settlement is arrived at between the Provinces and the Dominion.

I have the honor to be, Sir,
Your obedient servant,

A. M. ROSS,
Provincial Treasurer.

QUEBEC, 5th April, 1886.

To the Honourable
A. M. Ross,
Treasurer of the Province of Ontario, Toronto,

SIR,—I have the honor to acknowledge the receipt of your letter of the 27th March, and I am directed to say in reply to the concluding paragraph thereof, that the Government of this Province protests most strongly against the witholding of the amount of interest due on its share of the proceeds of the sales of Common School Lands collected and retained by the Government of Ontario, and trusts that the Government of Ontario will reconsider its "conclusion that it is advisable that no further payments on account of this fund be made until a settlement is arrived at between the Provinces and the Dominion," as such a determination would be a distinct violation of the conditions of the ninth section of the Award, the acceptance of which was forced upon this Province by Ontario.

The delays that have occurred from time to time respecting the settlement of the accounts cannot be attributed to the Government of Quebec any more than to the Governments of Ontario and the Dominion.

The Province of Quebec has not in its hands any monies belonging to Ontario and this Government is not aware of any reason which would justify the Government of Ontario in the retention of monies concerning the proprietorship of which there is no question, and the disposition of which is distinctly provided for by the Award.

It should be borne in mind that this Government has hitherto accepted payments from time to time on account of the interest on Quebec's share of the proceeds of the sales of these Common School Lands, when it had the right to demand that the full amount of the same should be paid into the hands of the Dominion Government by which the interest thereon would have been paid every six months.

I have the honor to be, Sir,
Your obedient servant,

H. T. MACHIN,
Assistant Treasurer, P.Q.

TREASURY DEPARTMENT, ONTARIO,
TORONTO, 10th June, 1886.

J. M. COURTNEY, ESQ.,
Deputy Finance Minister,
Ottawa.

DEAR SIR,—I understand you have a re-cast of the accounts prepared, and if so, and in print, will you please send me a dozen copies?

I have not yet received the statement of the Upper Canada Building Fund, promised in your letter of March 9th, 1885; nor the explanation of why the $95,147.23, appearing on page twelve of the printed statement of 1883, is not credited to Ontario as part of that fund. See my letter of 13th March, 1885. I should like this before we meet for settlement, so that we may be prepared to deal with that item.

When can a meeting be arranged for?

I am, Dear Sir,
Yours truly,

A. M. ROSS,
Provincial Treasurer.

OTTAWA, 11th June, 1886.

MY DEAR MR. ROSS,—I am sending you to-day an official letter with a dozen copies of the revised accounts. I am thoroughly and completely knocked up, and have to leave for a sea voyage almost immediately.

I sail on the 1st July and will be absent for about three months. The truth is that I came out last year before my health was re-established; I have never been absent an hour from work since I returned and we had an arduous session, but enough of myself. I think matters are now narrowed down to but few points, and we can arrange for a meeting in October to settle them. I wish you would arrive at some understanding with respect to the payments to the clergymen's widows; these come on the 1st July, and something ought to be done. Can you not arrange for this, either by a remittance or a request to continue to make the payments until a settlement is made?

Yours very truly,

J. M. COURTNEY.

Honorable A. M. Ross, Toronto.

OTTAWA, 11th June, 1886.

SIR,—I have the honor to acknowledge the receipt of your letter of yesterday's date and to send you herewith a dozen copies of the accounts as recast. I beg to call your attention to the fact that these were recast from the former accounts, but are carried down to the 30th June, 1885, and also that the arrears of payments under the Robinson Treaties ($52,800), and the capitalization of annuities ($303,280), together with interest thereon amounting to $510,097.17, have been included in a suspense account. The claim of the Dominion Government on account of money due to the Mississagua's of the Credit ($68,672.01), and to the Chippewa's of Lake Huron and Simcoe, and to certain Mississauga bands ($196,872) has not been included, as it was not in the former accounts, but these sums and the interest thereon, the Dominion Government consider as a claim against the old Province of Canada, and will be so dealt with in the final settlement of the accounts.

With reference to the other part of your letter respecting the $95,147.23, consideration will be given the claim at the time of settlement.

I shall forward to you in a few days a précis of the proceedings of the meeting of October, 1884.

I have the honor to be, Sir,
Your obedient servant,

J. M. COURTNEY,
Deputy Minister of Finance.

Honourable A. M. Ross,
Provincial Treasurer,
Toronto, Ontario.

OTTAWA, 12th June, 1886.

SIR,—Referring to my letter of the 8th January last, enclosing statement of the amount paid by the Dominion to the widows of clergymen, Upper Canada, during the six months ended 31st December last, I have now the honour to enclose herewith a state-

ment of further amounts paid on the account to date, showing, with the previous balances sent you, a balance due to this date of $3,802.28, for which amount I shall be glad to receive a cheque at your earliest convenience.

I have the honour to be, Sir,
Your obedient servant,

J. M. COURTNEY,
Deputy Minister of Finance.

The Honourable
THE PROVINCIAL TREASURER PROVINCE OF ONTARIO,
Toronto, Ont.

PROVINCE OF ONTARIO, IN ACCOUNT WITH DOMINION GOVERNMENT.

Amount paid Clergymens' Widows.

Amount of previous accounts			$2,585 78
1886.			
January 5.—Paid	Mrs. Cronyn		121 66
" 8.— "	Boswell		121 66
" 15.— "	Blake, Samson, Burnham, Anderson and Grier, $121.66 each		608 30
" 15.— "	Atkinson		121 66
" 16.— "	Harper		121 66
February 4.— "	Short		121 66
			$3,802 38

Finance Department, Ottawa, 12th June, 1886.

OTTAWA, 15th June, 1886.

SIR,—Referring to my letter of the 11th inst., I have now the honour to enclose herewith a précis of the proceedings of the meeting between Sir Leonard Tilley and the Treasurers of Ontario and Quebec, held on the 21st and 22nd October, 1884.

I have the honour to be, Sir,
Your obedient servant,

J. M. COURTNEY,
Deputy Minister of Finance.

Honourable A. M. Ross,
Provincial Treasurer,
Toronto, Ont.

TREASURY DEPARTMENT, ONTARIO,
TORONTO, 17th June, 1886.

Honourable J. E. ROBERTSON,
Provincial Treasurer, Quebec.

MY DEAR SIR,—I wrote Mr. Courtney a few days ago, asking when we would likely have a meeting in regard to the settlement of accounts. He replies that he is thoroughly knocked up, and has to leave for a three months' voyage, for the benefit of his health, on the first of July, and names October as a likely period for the meeting. This does not look promising for progress. But it appears to me that it would be no use to ask any other in the department to take up this work in his absence. I have asked him, if possible, to have a meeting before he leaves.

The recast is not on the plan I expected, and I thought, as the debt of the Province of Canada up to 1873 had been assumed by the Dominion, and the Act of 1884 assumed to relieve us from the interest thereon between 1867 and 1873, the Province of Canada account should commence only from that date, and should altogether exclude this debt and the interest on it. I expected the recast to have been upon that basis, and I think you should press the adoption of that plan. Can you yet inform me what position you have concluded to take on the Land Improvement Fund on Crown Lands? This is a matter that does not affect the Dominion, and although it appears we cannot make any immediate progress with the other matters until Mr. Courtney's return, I trust we will in the meantime arrive at a settlement of this item. Kindly let me know what position Quebec has decided to take on it.

I am, Dear Sir,
Yours truly,

A. M. ROSS,
Provincial Treasurer.

TREASURY DEPARTMENT, ONTARIO,
TORONTO, 17th June, 1886.

J. M. COURTNEY, Esq.,
Deputy Finance Minister, Ottawa.

SIR,—I am in receipt of your favours of the 11th, 12th and 15th inst. With regard to the item of $95,147, *re* Upper Canada Building Fund, which you say can be left for consideration at the time of settlement, I should like, before the meeting takes place, to have a statement of account of this fund, applied for in my letter of 23rd December, 1884, and also some explanation why the recommendation of the Public Accounts Committee of April, 1870, approved by the House, that Ontario should be credited with six per cent. interest on $600,000 of this fund, has not been carried out. I am at a loss to understand what objection there is to Ontario being credited with this amount, and unless put in possession of such, cannot be prepared intelligently to discuss the point when the meeting takes place. Information now would facilitate a settlement when we meet.

I am very sorry to learn from your unofficial letter that your health necessitates your leaving for England shortly, and that the meeting for the settlement can not take place before Octobeer. I fear a repetition of the delays of last year. Is it not possible to have a meeting before you leave?

The recast of the accounts has not been made on the principle I expected. Mr. Robertson and I suggested that, as the Dominion had, in 1873, assumed all the debts of the Provinces, and had in 1884 acknowledged that the Provinces should be relieved or reimbursed for the interest on such from 1867 to 1873, that the recast of the accounts as

between the late Province of Canada and the Dominion should assume a clear settlement up to that date, and only contain charges against Canada subsequent to that date. I think the settlement should start from that basis.

I have not received any reply to my application of 30th April for the payment of $124,685.18, Land Improvement Fund on School Lands. The Province has advanced this to the municipalities. Will you kindly send me a remittance of the amount?

In regard to Widows' Pensions, the Attorney-General expressed a doubt as to the liability of the Province for some of these, and the remittance has been deferred until I should get his opinion on the point, which I expect to receive shortly.

I am, Dear Sir,
Your obedient servant,

A. M. ROSS,
Provincial Treasurer.

OTTAWA, 18th June, 1886.

SIR,—I have the honour to acknowledge the receipt of your letter of the 17th inst. with reference to the recast of the Province accounts.

The Minister of Finance is absent, and there is no possibility of holding a meeting before the autumn. I shall endeavour to give the information on the points raised in your letter during the next week.

I have the honour to be, Sir,
Your obedient servant,

J. M. COURTNEY,
Deputy Minister of Finance.

Hon. A. M. Ross,
Provincial Treasurer, Toronto.

QUEBEC, 19th June, 1886.

The Honourable A. M. Ross,
Provincial Treasurer,
Toronto, Ont.

DEAR SIR,—I am directed by the Honourable the Treasurer to acknowledge the receipt of your letter of the 17th instant, and to say that his opinion respecting the recast that was to be made of the accounts between the Dominion and the Province coincides with yours, viz., that the Province of Canada account should only commence from the date when the surplus debt existing at the time of Confederation was, in 1873, assumed by the Dominion.

The Treasurer hopes, shortly, to be able to get the law officers to take up the question of the Land Improvement Fund. He desires me to say that he hopes to receive something from Ontario on the large amount which is due to this Province for interest on its share of collections on account of sales of common school lands.

Yours respectfully,

H. T. MACHIN,
Assistant Treasurer, P. Q.

HOUSE OF COMMONS, CANADA,
OTTAWA, 19th June, 1886.

DEAR SIR,—In reply to your letter of yesterday respecting resolution passed by Public Accounts Committee (1870) to the effect that Ontario should be credited with six per cent. interest on $600,000 Upper Canada Building Fund, I find that the Report of the Committee was never called for concurrence, consequently the House did not pronounce on it.

Yours, etc.,

JOHN GEO. BOURINOT.

J. M. COURTNEY, Esq.,
Deputy Minister of Finance.

OTTAWA, 21st June, 1886.

MY DEAR SIR,—With reference to that part of your letter of the 17th inst. respecting the Upper Canada Building Fund, I have now to state that I have caused an official enquiry to be made to the Clerk of the Commons as to whether the resolution of the Public Accounts Committee of 1870 was approved by the House. A copy of his reply I enclose herewith. You will see that the resolution was not approved by the House and is therefore inoperative. I have directed a copy of the account to be prepared and sent to you.

I shall be ready myself early in October, and I shall do my utmost to arrange them for a meeting.

Yours very truly,

J. M. COURTNEY,
Deputy Minister of Finance.

Hon. A. M. Ross.

OTTAWA, 29th June, 1886.

DEAR SIR,—In continuation of my former letter, I beg to state that I have given instructions to have the account of the Upper Canada Improvement Fund made up and sent to you, and I have also arranged with the Auditor-General to pay the widows' pensions due on the 1st July. I hope on my return to Ottawa, in October, to get an immediate settlement of all accounts.

Yours very truly,

J. M. COURTNEY,
Deputy Minister of Finance.

Hon. A. M. Ross,
Treasurer of Ontario, Toronto.

OTTAWA, 5th July, 1886.

SIR,—Referring to your letter of the 23rd December, 1884, and subsequent correspondence, I have now the honour to send you herewith the statement of the "Upper Canada Building Fund," showing the debits and credits and interest allowed from 1854.

I have the honour to be, Sir,
Your obedient servant,

W. FITZGERALD,
Assistant Deputy Minister of Finance.

Hon. A. M. Ross,
Treasurer of Ontario, Toronto.

TREASURY DEPARTMENT, ONTARIO,
TORONTO, 3rd July, 1886.

J. M. COURTNEY,
Deputy Finance Minister, Ottawa.

DEAR SIR,—I am in receipt of your favour of the 29th ult., advising me that you have given instructions to have the account of the Upper Canada Improvement Fund made up and sent. Will you kindly send copies of the various Orders-in-Council passed in connection with this fund?

I note that you have arranged with the Auditor General for the payment of widows' pensions due on 1st July, and for the purpose of the inquiry as to the liability of the Province for this fund, the Attorney General desires me to ask you for copies of all reports and Orders-in-Council on the subject, which I will be glad to receive as early as possible.

I am, Dear Sir,

A. M. ROSS,
Provincial Treasurer.

OTTAWA, 6th July, 1886.

SIR,—I have the honour to acknowledge the receipt of your letter of the 3rd inst. The Upper Canada Improvement Fund account has been sent to you, and the other matters referred to in your letter will be attended to at as early a date as possible.

I have the honour to be, Sir,
Your obedient servant,

W. FITZGERALD,
Assistant Deputy Minister of Finance.

Hon. A. M. Ross.
Provincial Treasurer, Toronto.

OTTAWA, 28th October, 1886.

SIR,—I am directed by the Honourable the Minister of Finance to state that he will be prepared to meet you and the Honourable the Treasurer of Quebec at Ottawa at any time which you may arrange between yourselves to settle the outstanding accounts between the Dominion of Canada, the late Province of Canada and the Provinces of Ontario and Quebec. Would you kindly arrange with the Treasurer of Quebec for such meeting and advise me as to the time appointed.

I have the honour to be, Sir,
Your obedient servant,

J. M. COURTNEY,
Deputy Minister of Finance.

The Honourable
THE PROVINCIAL TREASURER,
Province of Ontario, Toronto, Ont.

TORONTO, 2nd November, 1886.

J. M. COURTNEY, Esq.,
Deputy Finance Minister,
Ottawa.

DEAR SIR,—I am in receipt of your favour of the 28th ult., informing me that the Finance Minister will be prepared to meet the Treasurers of the Provinces in regard to the settlement of the accounts at any time that we may agree upon.

I have communicated with the Treasurer of Quebec intimating my willingness to meet him at any time that may suit his convenience, and suggesting that such meeting should take place before the close of the present month. When a time is arranged for, I will advise you.

I am, Dear Sir,
Yours truly,

A. M. ROSS,
Provincial Treasurer.

TORONTO, 2nd November, 1886.

Hon. J. G. ROBERTSON,
Provincial Treasurer, Quebec.

DEAR SIR,—I have an intimation from Mr. Courtney that the Finance Minister will be prepared to meet us in regard to the settlement of the accounts at any time we can arrange for.

I will be willing to meet you at any time that may suit your convenience, and would suggest that such meeting should take place before the close of the present month.

I have not yet received any intimation from you in reply to my enquiries as to what position you have decided to take in regard to the Land Improvement Fund upon Crown lands. Will you kindly have this matter considered so as to enable us at the proposed

meeting to arrive at some definite conclusion as to how this is to be dealt with, either by allowance to Ontario or by reference upon statement of the case, to the decision of some legal tribunal.

I am, Dear Sir,
Yours truly,

A. M. ROSS,
Provincial Treasurer.

OTTAWA, 3rd November, 1886.

DEAR MR. ROSS,—I have your letter of yesterday, and on Saturday I heard from Quebec that a meeting just now is impossible. I write to say that I am in much better health and that there is no likelihood of my having to leave Canada on that account. I am now quite at your service and will put everything aside to settle the accounts whenever your powers can be got to agree to a meeting.

Yours very truly,

J. M. COURTNEY.

Honourable A. M. Ross,
Toronto.

QUEBEC, 6th November, 1886.

The Honourable A M. Ross,
Provincial Treasurer, Toronto.

DEAR SIR,—I am directed by the Honourable the Treasurer of Quebec, who has been obliged to leave for Sherbrooke, to acknowledge the receipt of your letter of the 2nd instant, and to say in reply that he regrets that it is impossible for him to arrange for a meeting with the Honourable the Finance Minister, respecting the settlement of the accounts during the present month, and he is unable to say at the present time when he can fix a date for such meeting.

The Honourable the Attorney-General has not, so far, been able to find time to consider and give an opinion upon the question or the Land Improvement Fund.

I have the honour to be, Dear Sir,
Yours very truly,

H. T. MACHIN,
Assistant Treasurer, P. Q.

TORONTO, 11th November, 1886.

J. M. COURTNEY, ESQ.,
Deputy Finance Minister,
Ottawa.

DEAR SIR,—I am sorry to learn from your letter of 3rd instant, as also from one from Treasurer Robertson, that a meeting for further progress in the settlement of the accounts is at present impossible.

I shall be obliged if you will send me, at your earliest convenience, a statement of the items making up the following credit entries in the balance sheet of the Province of Canada account, (vide page 103, blue book of "Accounts between the Provinces and the Dominion,") viz. :—

Investment for Consolidated Fund	$ 997,666 72
Cash and Banking Accounts	1,410,964 02
Road and Harbour Security	202,377 63

I am, Dear Sir,
Yours truly,

A. M. ROSS,
Provincial Treasurer.

OTTAWA, November 26th, 1886.

MY DEAR SIR,—After great search I have been able to get the details you requested in your letter of the 11th instant, and I send herewith the statements, viz. :—

Investments, etc., Consolidated Fund	$ 997,666 72
Cash and Banking Account	1,410,964 02
Road and Harbour Security	202,377 63

Yours very truly,

J. M. COURTNEY,
D. M. F.

Honourable A. M. ROSS,
Provincial Treasurer, Toronto.

TORONTO, 15th January, 1887.

Hon. J. E. ROBERTSON, M.P.P.,
Provincial Treasurer, Quebec.

DEAR SIR,—I noticed in your Budget Speech of 1885 that you stated that you had a promise from Sir John A. Macdonald that the Dominion Government would pay all costs incurred by the Province in defence of its rights in the license case before the Privy Council.

May I ask if you have received these costs from the Dominion? If not, have you made any demand? and if so, what is the nature of the reply received? Although we have no similar promise, we expect to be treated in the same way, and I would be obliged if you would advise me if any action has been taken by you in pressing for a fulfilment of Sir John's promise.

May I again ask if you have come to any decision in regard to the Land Improvement Fund upon Crown Lands? The municipalities are very urgent for a settlement of this matter, and if there is no likelihood of your Government acquiescing in the amount being charged as a liability of the late Province, can we not arrange for a case to submit to the courts to have the question legally decided?

I am, Dear Sir,
Yours truly,

A. M. ROSS,
Provincial Treasurer.

QUEBEC, 19th January, 1887.

The Honourable A. M. Ross,
Provincial Treasurer,
Toronto, Ont.

DEAR SIR,—At an interview with Sir John A. Macdonald and some of his colleagues in Ottawa, after the decision of the Supreme Court respecting license matters had been rendered, Sir John expressed himself as not satisfied with the decision of the Supreme Court, that it would not carry equal weight with a decision of the Privy Council in England; he said that he thought of an appeal to England, as it would be more satisfactory to all parties. I replied, "Sir John, you formerly stated that you would abide by the decision of the Supreme Court, and now, if you drag Provinces to England, its no more than right the Dominion should pay the expenses of the appeal to England, as we are forced there by you." He replied, "Mr Robertson, I think you are right, the Dominion should pay all costs in appeal to England, and it will be done." We have now applied for the costs, in fact, do not know how much there are yet. I think you had better wait our demand, as there was no promise made to Ontario, although I meant the other Provinces as well as Quebec.

I have not been able to obtain the opinion of our law officers with regard to the Land Improvement Fund. The elections have prevented this being done this summer.

I should fancy there would be little difficulty in arranging a case for a decision of some of our Courts, but must consult the Honourable Attorney-General on this point.

The Ontario Legislature and that of Quebec, meeting, will necessarily prevent attention to this matter for some time.

I shall be pleased to receive another payment—two now due—on the interest upon the School Funds in your hands, and your attention to this will oblige.

Yours truly,

J. G. ROBERTSON,
Treasurer, P. Q.

QUEBEC, 18th March, 1887.

The Honourable A. M. Ross,
Provincial Treasurer, Toronto.

DEAR SIR.—Mr. Beausoleil brought with him from your audit office a statement of the total amount collected on Common School Lands from July 1st, 1867, to December 31st, 1886.

To enable me to make up the account as I should like to do, I require a statement shewing what proportion of each year's collection since the year 1882 is subject to the twenty-five per cent. deduction for the Land Improvement Fund.

Will you kindly have this statement prepared and sent to me at your earliest convenience?

Yours very truly,

JOSEPH SHEHYN,
Treasurer P. Q.

MEMORANDUM

Of meetings held at Ottawa, Tuesday, October 21st, and Wednesday, October 22nd, 1884, between the Treasurers of Ontario and Quebec, and the Minister of Finance of the Dominion of Canada, for the purpose of settling the outstanding accounts between the Provinces of Ontario and Quebec, the late Province of Canada, and the Dominion of Canada.

FINANCE DEPARTMENT, OTTAWA,
TUESDAY, October 21st, 1884,
(11 a.m.)

A meeting of the Honourable the Minister of Finance, and the Honourable the Treasurers of Ontario and Quebec, took place to-day, according to agreement.

Present at the meeting:—

Hon. Sir Leonard Tilley, C.B., K.C.M.G., Minister of Finance for the Dominion of Canada.
Hon. A. M. Ross, Treasurer of Ontario.
Hon. J. G. Robertson, Treasurer of Quebec.
J. M. Courtney, Esq., Deputy Minister of Finance of Canada.
H. F. Machin, Esq., Assistant Treasurer of Quebec.
C. H. Sproule, Esq., Auditor of Ontario.
L. Vankoughnet, Esq., Deputy of the Superintendent-General of Indian Affairs for the Dominion of Canada.

Statement by Mr. Courtney.

Mr. Courtney stated that he had heard from Ontario with regard to the accounts, but that he had heard nothing from Quebec. With regard to Ontario, there appeared to be two questions raised, viz.:—1st, the charges made by the Indian Department for annuities to Indians under the Robinson Treaty; and, 2nd, the Upper Canada Improvement Fund. With reference to the latter point, Ontario claimed that this fund consisted of one-fourth of receipts from Common School Lands sold during the existence of Upper Canada Improvement Fund, from the day of the abolition of the fund to 1st July, 1867—

Less cost of collection		$124,685 18
One-fifth of receipts from Crown Lands so sold and money so received		101,771 68
Upper Canada Improvement Fund, prior to abolition by O. C. of 6th March, 1861	$5,180 04	
Less receipt in former year reversed	69 96	
		5,119 08
Total		$231,575 94

The first item, $124,685.18, has been credited in the accounts to the Province of Ontario, in accordance with the provisions of Section 7 of the Award of the Arbitrators, and Ontario now claims that that Province should get credit for $231,575.94 as the amount of the Upper Canada Improvement Fund, instead of only $124,685.18. He (Mr. Courtney) had made enquiries into the item of $5,119.08, and found, as he had already advised the Treasurer of Ontario by letter, that that amount was made up by payments to various municipalities, a list of which had been furnished the Treasurer of Ontario, and by the sum of $1,913.17, which had been credited to the Province of Ontario as a balance for Colonization Roads.

With regard to the other item $101,771.68, he found that this amount was included in the accounts submitted to the Arbitrators, together with the other items just mentioned as forming the Upper Canada Improvement Fund (*vide* page 70 of the Record of Proceedings) and was, he presumed, included in the case submitted to the Privy Council, that the Arbitrators had not definitely included this specific item in their Award, but as the same had been presented to them and as by section 5 of the Award, they awarded to Ontario amongst other trust funds the Upper Canada Improvement Fund, and as there would be nothing to go to the credit of that Fund except the amount to be got from the Crown Lands, and as it appeared from Mr. Langton's reports (extracts from which are hereinafter quoted) that the amount from the Crown Lands was exactly in all fours with the amount from the School Lands, it would seem more than likely that the Arbitrators had awarded this sum of $101.771.68 to Ontario, in which case the amount would have to be added to the debt of the Province of Canada. He had, however, hesitated to place the amount at the debit of the Province of Canada and credit of Ontario, for the reason that on looking at the old correspondence he had found, that it was a ground of difference between the Treasurer of Ontario and Quebec before the Arbitration was settled, and as the then Treasurer of Quebec, who is the present Treasurer, had written to the then Finance Minister, Sir Francis Hincks, on the subject, he thought it better under all the circumstances to waive the charge for the present until the present Treasurer had had an opportunity of looking into the matter and letting him know later on, which he had since promised to do.

Mr. Courtney further stated that for convenience of reference, he had thought better to engage Mr. Treadwell of his Department, to take notes of the conversations had, so that a report of the proceedings could be obtained as a basis to go upon.

Extracts from Mr. Langton's Report Book, referred to by Mr. Courtney.

The Improvement Fund. Ontario claims that as long as the Fund remained in force, all lands were sold with a pledge that the money received on them should be expended in part for roads. All the money actually received during the existence of this Fund was so expended, but Ontario claims that all arrears upon lands *sold* during that period, although the money was not *paid* until afterwards, was similarly liable. The whole amount received by the Province between the abrogation of the Fund and 30th June, 1867, on account of Crown Lands sold during the existence of the Fund is stated to be $636,072 97

Less 20 per cent. for cost of collection..... 127,214 59

$508,858 38

One-fifth thereof appropriated to Improvement Fund, $101,771.69. This Ontario claims to be an addition to the debt, and payable to Ontario.

Besides this amount, there is a similar amount on account of Common School Lands amounting to $124,635.18, which makes no change in the debt, as if the claim is granted it is taken from the Common School Fund to be added to the Improvement Fund. As this does not affect the amount of the debt it is more properly a question for the Arbitrators than for the Dominion Government, but the fact can hardly be left out of account in deciding the former question as the principle being admitted, it would involve a further sum to be paid to Ontario before the Common School Fund is divided between the two Provinces.

The argument of Quebec against this claim rests upon the wording of the Act, and of the Order in Council establishing the Fund. The Act provides that the *proceeds* of the lands shall be appropriated, and the Order in Council also speaks of the *proceeds*. Quebec claims that nothing but what had been *realized* during the existence of the Fund should be so appropriated.

Extract No. 2.

I should have very little doubt that the claim for the Improvement Fund was a liability of the late Province, being an engagement to the settlers that a certain portion of the purchase money of the lands sold whilst the Fund was in existence was to be expended for their benefits on roads, were it not that an opposite view of its liability was twice taken by the Government of the day with regard to this Fund: first, when the Fund was supposed to have been abolished by Mr. Vankoughnet's Land Act, and, secondly, abolished by Order in Council. Upon both of these occasions the further payment was stopped upon all moneys *received* after the Fund was abolished, although they might have accrued upon lands sold during the existence of the Fund. There is, however, a further difficulty in settling this question. Whatever principle is applied to the Crown Lands, the same will apply to the Common School Lands. But the claim, if granted on account of the Crown Lands, would affect the amount of the debt, but not its apportionment between Ontario and Quebec, and will thus be a matter solely affecting the Dominion. But with regard to the School Lands it would not affect the amount of the debt in any way, but would affect the apportionment of the debt and assets between the Provinces, and would thus be a matter solely within the jurisdiction of the Arbitrators. It appears to me that in this way a conflict of decisions might arise between the two which might be very inconvenient. I would therefore suggest that the decision as to the principle involved be left to the Arbitrators, and that if they admit the claim of Ontario, to be authorized to add ————to the amount of the debt as reported to them as exclusive of this claim.

Extract No. 3.

You already understand the principle upon which Mr. Wood bases his claim for the Improvement Fund. There is a great deal of force in the argument, but it should not be lost sight of that the Government of the late Province of Canada did in effect twice decide against the claim now brought. In 1860 an Act was passed which was intended to repeal the clauses which established the Improvement Fund, and from the date of that Act all further apportionment of the receipts towards the Improvement Fund was stopped. It was afterwards discovered that the repealing Act had quoted the old Land Act, repealed by its title in the Consolidated Statutes, whilst in that compilation the clauses establishing the Improvement Fund had been inserted in another Act which remained in force. An Order in Council was then passed, in March, 1861, abolishing the Fund, and at the same time a fresh distribution was ordered of the proportion of the receipts from the date when the former distribution had been stopped to that of the Order in Council, finally abolishing the Fund. In both these cases, therefore, the Government of the day were guided by the date at which the payments on the land were received, and not by the date at which the sales were made.

Mr. Wood states that an Order in Council was passed referring the question to the decision of the Arbitrators, or at least you led him to believe that such an Order had been passed. Such, however, was not the case. I suggested this course in a report to you upon the subject, and I understood you to take a favourable view of my suggestion, but there was no action of the Government in the matter. I still think that if Quebec had been properly represented in the Arbitration, this would have been the best way of meeting the difficulty; but it is impossible to close our eyes to the fact that no arbitrator from Quebec was present when this question of great importance to it was decided. I express no opinion as to the effect which the absence of the Quebec arbitrator may have upon the validity of an Award in matters which, by the Act, were submitted to the Arbitrators, but I cannot think that the Government of the Dominion can be bound by a decision, arrived at without the privity of Quebec, in a matter over which the Arbitrators would chiefly have had no jurisdiction, unless the Dominion authorities had, as was proposed, specially referred the subject to them. I think that, as matters now stand, this question must be decided on its merits, irrespective of the decision the Arbitrators have

come to in the analogous case; and in arriving at that decision, interpretation twice put upon the Statute by Governments of the Province of Canada, and the fact that the object of the Fund was for local improvements in Ontario, cannot be left out of account.

The amount claimed is $106,771.68. I have no means of verifying the figures, but assuming the returns of the Crown Lands Department to be correct, this amount would have to be added to the debt.

Upper Canada Land Improvement Fund.

This, it was agreed, should stand over until Hon. Mr. Robertson had had an opportunity of consulting his colleagues with reference thereto.

Interest.

The Treasurers wished to be informed as to how the increased capital set forth in the Act of 1884, increasing the Provincial subsidies, was made up.

Rockwood Asylum.

The Treasurer of Quebec asked for information as to the charges made against the Provinces under this head. Mr. Courtney said he was convinced the accounts as to this asylum had been sent to both Treasurers, and Hon. Mr. Ross stated that he had made enquiries of the Superintendent of Asylums, and found this was a fact.

Slides.

Hon. Mr. Robertson called attention to the charges for slides—one-third to each of the Provinces and one-third to the Dominion, and he wished to know the basis upon which the charges were made up. As he understood the matter, the slides were the property of the Dominion, and he raised the point as to whether the charges should not be in proportion to the benefit derived instead of an absolute charge. He wished to see the accounts and vouchers.

Mr. Courtney explained that in this account he had followed the course adopted by his predecessor, Mr. Langton; that the cost of the slides was not charged, but the cost of the agency; that the agents act for all parties, and the cost of the agencies had simply been divided among the three equally; that he did not see how a ratio could be got at as he could not tell how much each agency cost.

Mr. Robertson said it might be that the Province of Quebec should pay the one-third charged, but he wanted to see the accounts and vouchers.

Burying Grounds at St. John's and Quebec.

Hon. Mr. Robertson asked for information as to the charges made on these accounts.

Montreal Turnpike Trust.

Hon. Wm. Robertson called attention to this Fund, which he found put down as an asset. He also found several amounts charged as interest on certain of these debentures held by the Dominion Government. He pointed out that the Trustees of the Fund pay the interest, and that any deficiency is a charge against the Crown. This was not an asset of the Province of Quebec, but a liability.

Court Houses, Quebec.

Hon. Mr. Robertson called attention to this, which is put in as an asset. He did not see how it could be called an asset.

INDIAN ANNUITIES.

Capitalization of annuities	$999,835 55
Arrears of payments to Indians under Robinson treaties	140,800 00
Capitalization of annuities	303,280 00

The question of the Indian annuities was then taken up and discussed as follows :

Mr. Ross.—The first position taken in reference to the annuities under the Robinson Treaties is, that they were capitalized at the time of Confederation, and in the statement of debt submitted to the Arbitrators. the amount so capitalized was stated to be $88,000. This sum was the amount at which these annuities were valued by both the Dominion and the Province, and we claim that by so capitalizing them the Dominion assumed the whole liabilities under the Treaties at $88,000, and as if the Indian population had decreased, the Dominion would have had the benefit of the amount they would not on that account have had to pay the Indians. So now, on the contrary, we claim that in assuming a fixed amount, they ran the risk of any increase, and such increase (if any) must now be paid by the Dominion. These arrears which we are now called upon to pay have never been actually paid, and under the Treaties, they are to be paid to individual members of the bands. How, then, are we to know to whom to pay them, supposing we had to pay them ?

Mr. VANKOUGHNET.—The Indians have children.

Mr. Ross.—How are you going to prove the heirship ?

Mr. VANKOUGHNET.—The amounts would go to the families of those Indians who would have been entitled to the same under the Treaties, as regards the consolidation of the amount at the time of Confederation. That may be all very true, but it only met the case as it then existed. Under the Robinson Treaties, there are provisions made for an increase of the amount of annuities to be paid to the Indians to $4 a head, and such further sum as Her Majesty might think proper, provided the revenue from the land would produce such an amount as would enable the Government to pay the increased rates without incurring loss ; and the Indians now claim these arrears on the ground that the lands did produce sufficient revenue, and in such case they would be entitled to the increased amounts.

Mr. Ross.—Suppose a portion of the Indian population had died off, and instead of having $4,400 to pay each year the Dominion had only $2,000 to pay, who would have derived the benefit, would it not have been the Dominion ? They would not have reimbursed the Province, and so I contend that when they capitalized the annuities as they did, they assumed the liability subject to the contingency of the amount to be paid being afterwards increased.

SIR LEONARD TILLEY.—I do not know the terms of the Treaties, but if I understand them they were that the Indians, whatever number they might be, were to have so much a head, which amount was liable to be increased under certain circumstances. There was no fixed number of Indians to whom the annuities were to be paid.

Mr. VANKOUGHNET.—There were numbers named in the Treaties—in the Robinson-Huron treaty, 1,422, and in the Robinson-Superior treaty, 1,240. These were the numbers known at the time, but the Treaties did not say these were the only Indians to come under the provisions of the Treaties. I will read the portion of the Robinson-Huron Treaty relating to the increase, and it is the same as the Robinson-Superior Treaty exactly, except in the numbers stated as the numbers of Indians concerned, the yearly

annuity fixed by the former Treaty as originally to be paid being £600, and by the latter, £500 currency :—

"The said William Benjamin Robinson, on behalf of Her Majesty, who desires to deal liberally and justly with all Her subjects, further promises and agrees that should the territory hereby ceded by the parties of the second part at any future period produce such an amount as will enable the Government of this Province, without incurring loss, to increase the annuity hereby secured to them, then and in that case the same shall be augmented from time to time, provided that the amount paid to each individual shall not exceed the sum of one pound, provincial currency, in any one year, or such further sum as Her Majesty may be graciously pleased to order, and provided, further, that the number of Indians entitled to the benefit of this Treaty shall amount to two-thirds of their present number, which is fourteen hundred and twenty-two, to enable them to claim the full benefit thereof ; and should they not at any future period amount to two-thirds of fourteen hundred and twenty-two, then the said annuity shall be diminished in proportion to their actual numbers."

Mr. Ross.—You will see that under the Treaties there is provision made for an increase of annuity and also for a diminution of the amount to be paid, but not for any increase in the numbers of the Indians beyond those named in the Treaties. Now I contend that the Dominion, in assuming a fixed amount and capitalizing the annuities as they did at the time of the Arbitration, virtually settles the amount of these annuities and assumed the risk of there being an increase. They assumed the liability subject to this contingency.

Mr. Robertson.—It seems perfectly clear to me that this sum of $88,000 was fixed upon by the Dominion Government. Query—Can that Government afterwards, of their own motion, and without the consent of the two Provinces, increase the amount to be paid ? It seems to me they cannot. If so, what is to hinder their fixing the annuities at any amount they choose or at any period they choose ? As it is, they claim not only that an increased amount should be paid, but that there is also an increase in the number of Indians entitled to be paid. The Dominion fixed the amount themselves, and I contend they are bound by the amount so fixed.

Mr. Vankoughnet.—The lands were taken by the Provinces, subject to the liabilities on them, and this is one of the liabilities on these lands ceded by the Indians.

Mr. Ross.—It is not a liability.

Mr. Robertson.—The first amount fixed was certainly a liability and lien upon the land.

Mr. Ross.—The Courts have decided against such a contention, viz. : That the claims are a lien on the lands.

Mr. Robertson.—I disagree with you on this point. I believe these annuities to be a lien upon the lands, but the question is whether they can be increased by the Dominion Government without or against the consent of the Provinces.

Mr. Vankoughnet.—The treaties were with the Indians, and they contend that as the lands increased in value the annuities should be increased as well.

Sir Leonard Tilley.—How has this sum been increased ?

Mr. Vankoughnet.—By the increased number of Indians entitled to be paid under the treaties.

Mr. Ross.—Mr. Spragge has claimed that there was no provision made by the treaties for any increase in the number of Indians. There was a provision for a diminution but not for an increase.

Mr. VANKOUGHNET.—It has always been the case that as the Indians increased in number the per capita amount has increased. The treaties do not limit the number.

Mr. Ross.—According to Mr. Spragge's contention they do.

Mr. VANKOUGHNET.—It is true they state a number, and further, that if the numbers of Indians entitled to share in the annuities should not amount to two-thirds of that number they would not be entitled to receive their full annuities, and the annuities should be reduced in proportion to their actual numbers, but at the same time the treaties do not fix these numbers as the greatest number of Indians who were to receive the annuities.

Mr. Ross.—There is no doubt a provision for the diminution of the numbers, but I contend there was no provision for an increase beyond the numbers fixed in the treaties. Apart from that you are now charging us for arrears for parties who are dead. How are these amounts to be paid? And you are also charging for Indians who were not parties to the treaties at all.

The further discussion of this matter was adjourned until 2 p.m.

OTTAWA, Monday, October 21st, 1884.
(2 p.m.)

Conference again met pursuant to adjournment.

Present.—Same as in the morning and also G. W. Burbidge, Esq., Deputy Minister of Justice of Canada.

INDIAN ANNUITIES (*Continued*).

Mr. Courtney stated that during the recess he had examined the several items and was of opinion that the $88,000 should have been taken off the account charged to the Capitalized annuities, and that it was in fact charged twice in the Accounts.*

The discussion was then continued as follows:—

Mr. Ross.—We claim we are charged for an increased population that it is not provided for by the treaties, and for a larger population than you have actually paid.

Mr. VANKOUGHNET.—Have you noticed with reference to these treaties that the annuities under them were to be paid to the chiefs and their tribes?

Mr. Ross.—Yes.

Mr. VANKOUGHNET.—The *tribes* would include men, women and children.

Mr. Ross.—Yes, at that time.

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* Before the adjournment Mr. Ross had claimed that $88,000 had been charged against the Province of Canada twice, once in the amount of debt charged to the Province, and again in the statement of account when capitalizing the Indian annuities. Mr. Courtney here admits that Mr. Ross' contention was correct.

Mr. VANKOUGHNET.—Well, then, the annuities were to be increased to $4 a head to each individual when the revenue warranted the increase, so, therefore, this $4 a head would include every man, woman and child.

Mr. Ross.—At the increased numbers?

Mr. VANKOUGHNET.—Yes.

Mr. Ross.—That is not the view taken by the Indian Department in 1873. Mr. Spragge, the Duputy Superintendent of Indian Affairs at that time was of the following opinion on that point:—

"It is proper to explain that although a larger number of Indians than that expressed in the Robinson Treaties may have been allowed to participate in the annuities, the Treaties, while they provided for a diminution deduction in the event of a decreased population, do not contemplate that in the event of the annuities being augmented, the numbers to receive them shall exceed those at which the various bands were estimated when the Treaties were executed."

Mr. VANKOUGHNET.—Mr. Spragge overlooked the fact that the Treaties were made with the Indian Chiefs and their tribes. It could not of course be stated in the Treaties exactly how many Indians there were going to be at a future date and it is not usual to state even approximately the number. The Government is bound by the Treaties to pay the anuity to whatever number of Indians may be existing at any future time.

Mr. Ross.—In the first place there was a lump sum to be paid.

Mr. VANKOUGHNET.—Yes, in the first place, but there was a provision that under certain circumstances the annuities were to be increased to an amount not exceeding $4 *a head.*

Mr. Ross.—Mr. Spragge's report shows that the Indian population was so fluctuating that as late as 1873 it was not safe to take the numbers reported and so he recommended that the computation should be based upon the numbers named in the Treaties.

Mr. VANKOUGHNET.—True, the Indian population was fluctuating, and at the time of Mr. Spragge's report the numbers were not accurately known, but now, their numbers are well established, and it is now very clear that when the Treaties were made there were Indians who were entitled to an interest in the lands ceded by them who were not present or represented. We have an instance of that in a band at Lake Temagaming who were not represented at all at the Treaty. It must be remembered also that the amount of the annuity that the Indians received per head was so small that it was not worth while for these Indians to go the long distance that intervened between their hunting grounds and the places of payment. It has only been since the annuities have been increased that these Indians have considered it worth their while to go to the places where the annuities are paid to get their annuities.

Sir LEONARD TILLEY.—When were the annuities increased?

Mr. COURTNEY.—The first payment was made in 1875, in Mr. Laird's time. The matter was brought to the attention of the Government in 1873 by Mr. Dawson, and the increased annuities were paid in 1875, and since then a vote has been taken regularly each year from Parliament.

Mr. Ross.—What basis of proof had you that they were entitled to an increase at all?

Mr. VANKOUGHNET.—We had the reports of our agents and superintendents.

Mr. Ross.—As to the receipts from the lands?

Mr. COURTNEY.—On that point we have Mr. Mowat's own admission. Mr. Mowat says:—

"The undersigned has received information from the Crown Lands Office that the amount received before Confederation in respect of the lands on the north shore of Lake Superior was about $110,000. The amount so received in respect of the east and north shores of Lake Huron the undersigned has not been able to ascertain, *but there is no doubt sufficient has been received to entitle the Indians to the increased annuities which they claim.*"

Mr. Ross.—I would like you to note that that is only as regards one Treaty and it is without taking into consideration the expenditure in the territory at all. It is clear by the Treaties that the Indians were only to become entitled to receive the increased annuities provided they could be paid out of the revenues of the lands ceded without the Province incurring loss. The amounts paid by the Province for Administration of Justice, for surveys, colonization roads, etc., must be charged against the revenue, and if these are taken into account it would seem, from information I have, that the expenditures have been more than the receipts and consequently the balance would be on the other side.

Mr. ROBERTSON.—Did you in making this charge of $140,800, as arrears of payments to the Indians under the Treaties, estimates the annuities at $4 a head?

Mr. COURTNEY.—Yes; the figures were supplied me by the Department of Indian affairs.

Mr. Ross.—According to the statements furnished the other day there appear to have been in some cases no pay-lists or statements at all.

Mr. ROBERTSON.—The capitalization of the annuities is taken at $4 a head and you charge us at that rate from 1867, instead of charging $1 a head and only charging the increase from the time the increase was made. It seems to me to be absurd to charge us $4 a head and interest from 1867 when the increases were not even claimed until 1873 and not made until 1875.

Mr. VANKOUGHNET.—The Indians claimed arrears long before that time.

Mr. Ross.—That is not in accordance with the correspondence as published.

Mr. ROBERTSON.—They may claim what they like, but the question is whether they have any right to the increase until 1875,—in fact even then. Why should the Province of Canada be charged with that $3 extra from 1867 to 1873?

Mr. VANKOUGHNET.—Because we claim it was really due them.

Mr. Ross.—To whom are we to pay the arrears now if we were to pay them.

Mr. VANKOUGHNET.—To those who were present in person at the Treaties, or their heirs.

Mr. Ross.—Under the Treaties the amounts were to be paid to *individual* Indians. They are not to be paid to their heirs.

Mr. ROBERTSON.—What do you call Indians? Half or three-quarter breeds? If you stick to the letter of the Treaties you have to pay only to Indians.

Mr. VANKOUGHNET.—Those who are recognized by the Government as Indians.

Mr. ROBERTSON.—Have we nothing to say in the matter when we have to pay the money?

Mr. VANKOUGHNET.—Half-breeds by the law in Ontario are Indians. As long as they have Indian blood in them they are legally Indians.

Mr. ROSS.—You charge the $140,800 on the basis of an average population of 2,700 from 1850. Your own returns show the numbers were less than that. You never paid that number, but you seem to take that as an average.

Mr. VANKOUGHNET.—We have to strike an average in some cases, as unfortunately some of our pay lists for the back years cannot be found.

Mr. ROSS.—You have the amount that was paid—some record of it?

Mr. VANKOUGHNET.—I presume we can get at that.

Mr. ROSS.—I see that in a number of years there are no pay lists. Then take Mr. Spragge's report:—

"The census returns of these Indians indicate a fluctuation in each year. Thus in 1850 the Lake Huron Indians are put down as numbering 1,846, and in 1871 as number-1,072."

Mr. VANKOUGHNET.—These fluctuations are caused, as I pointed out before, by the Indians being off to their hunting grounds and not considering it worth their while to come in to get so small an annuity as they were paid prior to the increase. I know that for a fact.

Mr. ROSS.—You did not pay them and yet you are now charging us with these arrears?

Mr. VANKOUGHNET.—The Indians are claiming them.

Mr. ROSS.—Mr. Spragge says:—

"In view of the foregoing statement as to the fluctuating population of these Indians, the computation should be based upon their numbers at the time of making the Treaties in 1850, namely, Lake Superior Indians, 1,240; Lake Huron Indians, 1,422."

These are the views of the Indian Department as late as 1873, at the time the claims were being made—that the payments should be based not upon uncertain statements, but upon the numbers named in the Treaties.

Mr. VANKOUGHNET.—We have now got more reliable data to go upon than merely taking the numbers named in the Treaties.

Mr. ROSS.—The census returns showed the numbers of the Lake Huron Indians in 1871, to be only 1,072.

Mr. VANKOUGHNET.—These returns are not as a rule authentic, for the reasons I have given before—that the greater part of these Indians go off to their hunting grounds, and are not on their reserves more than two or three month in the year.

Mr. ROSS.—How did you get at the correct numbers?

Mr. VANKOUGHNET.—By a good deal of enquiry from the Chiefs and from the officers of the Hudson Bay Co., and from others who are intimately connected with the Indians, and have means of knowing their numbers.

Mr. ROSS.—The Indians on the Manitoulin Island are not in the territory at all.

Mr. VANKOUGHNET.—Some of the Indians on that Island have claimed annuity under the Robinson Treaty, and their claims have been recognized because it was found that they had moved to the Island from the North shore of Lake Huron. The Island was set apart for all Indians who chose to go there, and some of the Lake Huron Indians elected to go there after the Robinson Treaties, but did not bar their right to share in the annuities under the Treaties.

HON. MR. ROSS'S ARGUMENT.

Mr. ROSS.—With reference to these Indian Annuities, the first point I take is that we are not liable at all for any claim for arrears under the Treaties; that when the annuities were capitalized at $88,000, as they were at the time of the arbitration with the consent of the Dominion and the Provinces, the Dominion assumed them at that sum and that that was a virtual settlement of them. They were assumed at that sum by the Dominion and the Dominion ran the risk of any increase that might be hereafter claimed by the Indians; but if that settlement is not to be accepted as final and the matter is to be re-opened, I claim that no charge is allowable prior to a demand being made, and no such demand was made until 1873, and the increased annuities were not paid until 1875. In any case the annuities should not be paid to a larger number of Indians than are named in the Treaties, or 2,662. The arrears are now calculated on a larger population than that, but the census returns for 1871, as shown by Mr. Spragge's report in 1873, give them a population of only 2,525, and it would appear from the same report that the Indian population was so fluctuating that in his opinion the computation should be based upon the numbers named in the Treaties, or 2,662. I contend, therefore, that at the utmost we should not pay annuities to a larger number of Indians than named in the Treaties, that is, supposing that our contention as to not being liable at all is decided against us. In the next place we hold that the Dominion Government, in increasing the annuities, had no evidence before them that the Indians were entitled to the increase.

Sir LEONARD TILLEY.—That point seems to have been conceded by Mr. Mowat.

Mr. ROSS.—Mr. Mowat could not bind the Province of Ontario, and the information he had then was certainly incorrect. All the expenditure made in the territory should be charged against the receipts before the Province could be called to increase the annuities, for no such increase is to be made until it can be done without loss to the Province. The expenditures in connection with Surveys, Colonization roads, etc., must be charged against the receipts, and it must appear that the surplus revenues are sufficient to admit of the annuities being increased without loss to the Province before the Indians can claim or become entitled to the increase; and this I contend has not been the case, and the Dominion Government acted without knowing what the expenditures were, and besides they acted without the consent of the Province.

Sir LEONARD TILLEY.—There certainly seems to be a very wide divergence of opinion on that point.

Mr. ROSS.—At that time the expenditures were not taken into account, and under the Treaties they certainly were to be taken into account.

Sir LEONARD TILLEY.—I am not prepared to admit that I think the divergence is so great that we will not be able to settle the question now in the absence of the Superin-

tendent General of Indian Affairs, and I think the matter will have to remain until after his return from England. In the meantime it would greatly facilitate matters if you two gentlemen could agree upon the points to be discussed then.

Mr. Ross.—Then there is the further objection to the charge for interest on these alleged arrears.

Hon. Mr. Robertson's Argument.

Mr. Robertson.—So far as those claims for annuities to the Indians are concerned, it seems to me that the sums payable to the Indians under the Treaties, made with them from a direct lien upon the lands which were ceded by those Treaties and under the provisions of the B. N. A. Act, the lands are subject to all trusts upon them at the time of Confederation. The lands ceded by these Treaties are situated in the Province of Ontario, and at Confederation became the property of that Province subject to all the trusts attaching thereto. If, therefore, an additional amount is payable to the Indians it is on the supposition that the receipts from these lands have increased to such an amount as to entitle the Indians to the increased annuities under the Treaties. Then, upon the ground that there is no lien upon the lands for those annuities, Quebec would actually be paying for the increased value which the Ontario Government received for lands within its territory and with which Quebec has nothing to do in any way. So far as Quebec is concerned it seems to me that capitalizing these annuities at $88,000, as was done in the statement of debt by the Dominion presented to the Arbitrators, ought to be considered as a finalty, especially as the Dominion was notified by both Ontario and Quebec that no increase should be made to the debt without their consent. It seems too late in the day to bring up claims that were virtually settled years and years ago.

Sir Leonard Tilley.—In what way?

Mr. Robertson.—The debt was continually being added to by the Dominion Government. We protested against any increase being made to the debt unless we were consulted. In some cases we have consented, but in this case it seems rather late in the day to bring in this claim after so many years, when the Dominion Government had itself fixed the amount of the Indian annuities, and especially when the claim is based upon such insufficient data. I do not pretend to know anything about the law on the subject, but it seems to me that it is a matter which the Dominion, having the Indians entirely in their charge, should settle as a Dominion without charging anything to the Province of Quebec.

Sir Leonard Tilley.—I cannot say that I agree with you. I think that you have not established that there has been any absolute amount fixed, or that there has been any thing done on the part of the Dominion, to prevent it bringing forward any claims that it may legally have against you, even without your consent. The mere fact of your having notified us that you would not recognize any increase to the debt account unless with your consent does not relieve from the obligation.

Mr. Robertson.—The statement of debt of the Province of Quebec was adopted by an Order in Council of the Dominion.

Sir Leonard Tilley.—There was nothing in that Order which prevented charging to the different Provinces any claims that might arise against them.

Mr. Robertson.—There was a certain amount of debt agreed upon and certain conditions were made and agreed upon. Why did not the Dominion Government then say that there might be other claims? We supposed that everything was contained in that statement of debt. Now, ten or fifteen years afterwards, you charge us with additional

amounts in the shape of arrears for increased annuities to the Indians—amounts, moreover, that you have not paid to them, and not only that but you charge us with interest from 1850 though the claims for the increase were not made until 1873.

Sir LEONARD TILLEY.—You lay down this proposition that the debt was agreed upon and that a letter was signed by the two Governments that they would not recognize any sum not mentioned in that statement of debt which they did not agree to. I take exception to the statement that a final settlement or agreement as to the amount of the debt was ever assented to by the Dominion Government. There was a statement of existing debts as ascertained at that time, but that did not exclude us from charging any subsequent amounts that might be discovered, nor would the mere fact of your signing a letter in any way prevent us.

Mr. Ross.—These amounts were taken into account and were fixed and capitalized at a fixed sum.

Sir LEONARD TILLEY.—Well, the subject will have to stand over until after the return of the Superintendent General of Indian Affairs from England, as it is one over which he has immediate charge.

This *was agreed* to *by* all parties.

Claims of the Mississaguas of the Credit.....	$ 68,672 01
Claims of the Chippewas of Lakes Huron and Simcoe, and of certain Mississagua bands.....	196,872 00

Mr. Ross.—Under what Treaties is this claim of $68,000 made?

Mr. VANKOUGHNET.—It is a claim for moneys that were received by the Crown Lands Department of the old Province of Canada in payment for lands surrendered by the Indians in the year 1820, to be sold for their benefit, but which were never placed to their credit. The facts of the case are set forth in the memorandum of the Right Honourable the Superintendent General of Indian Affairs in his report to Council of the 7th Juue last.

(Mr. VANKOUGHNET then read the report in question which is hereto annexed, marked A.)

Mr. Ross.—Have any demands for these moneys been made by the Mississaguas bands?

Mr. VANKOUGHNET.—Yes; we have repeatedly had very urgent demands.

Sir LEONARD TILLEY.—As I understand this claim of the Mississaguas, it is a claim that the old Province of Canada owed these Indians certain money before the Union which never was transferred to the credit of the Indian Fund, and therefore the old Province of Canada owes it to them yet, and you are charging it with it and the accrued interest thereon.

Mr. Ross.—Was it recognised by the late Province of Canada?

Mr. VANKOUGHNET.—The matter was never brought up.

Mr. Ross.—Is it not strange that there has been so long a delay in presenting this claim.

Sir LEONARD TILLEY.—I can cite a parallel case—the Glasier case, which was not brought up for fifteen or twenty years, but it was considered a just and equitable claim and accordingly it was paid though it was so old a claim.

Mr. ROSS.—That was by consent, but it is hardly fair to charge us now with this old claim without our consent.

Mr. COURTNEY.—Suppose as in the Rescue case a judgement was given against the Dominion by the Supreme Court in respect to a liability of the old Province of Canada, it would not be necessary to obtain the consent of both Governments before it could be charged against the old Province of Canada.

Mr. ROSS.—That is another question. I cannot see the advisability of keeping claims back for twenty years.

Mr. VANKOUGHNET.—The Indians have always claimed the amount, and the old Province nover repudiated it.

Mr. ROSS.—There is an Order in Council of the 7th August last, stating that this amount is to be placed to the credit of the Indian Fund. This is the first intimation we have had of this claim. Is it seriously intended to press it?

Mr. VANKOUGHNET.—I think so.

Mr. ROSS.—Here is another claim for $196,000, for some bands whose territory was included in the Robinson Treaty without their consent or knowledge. I think we are only liable for the provisions of the Treaty.

The further discussion of these claims was by agreement allowed to stand until the return of the Right Honourable the Superintendent General of the Indian Affairs.

Adjourned till Wednesday, October 22nd, 1884, at 10 a. m.

OTTAWA, Wednesday, October 22nd, 1884,
(10 a.m.)

Conference met pursuant to adjournment.

Present: Hon. Mr. Ross, Messrs. Machin, Sproule and Courtney.

It was stated that Hon. Mr. Robertson was unable to be present on account of sickness.

The Treasurer of Ontario asked for information on the following items in the Accounts, viz:—

Payment to the heirs of the late Lieut. D. Murray as compensation for claim	$1,000 00
Payment to Alex. Youille, for saw logs lost before Confederation.	1,000 00
Rev. Wm. Brethour, for Spiritual Services to Protestant labourers engaged in the construction of the Beauharnois Canal	600 00

Mr. Machin asked for information as to the Bank of Montreal credit cheques, $26.00.

Hon. Mr. Ross and Mr. Machin asked for particulars as to the following charges against the old Province of Canada, viz :—

1. Temiscouata advance, (page 14)	$3,000 00	
Temiscouata advance (page 14)	1,275 00	
		$4,275 00
2 Col. Gugy, (page 16)	$427 20	
3. Col. Gugy, (page 16)	747 60	
		1,174 80
4. Interior Department, Ordnance Lands (page 16)		211 86
5. Robert Skead, Hydraulic Rents (page 16)		406 00
6. Mohawk Indians, Clergy Reserves (page 16)		8,051 45
7. James Tibbitts, N. B. Boundary (page 18)		6,533 00
8. R. Beveridge, N. B. Boundary (page 18)		166 70
9. John Emerson, N. B. Boundary (page 18)		83 33
10. Cyrille Tessier, Burying Ground (page 18)		501 30
11. Edouard Lemoine (page 18), Seigniorial Capital $8,908.34 ; Interest $2,000.00		10,908 34
12. Hon. John Glasier, N. B. Boundary (page 18)		2,441 65

Mr. Machin requested particulars in respect to the following, viz :—

1. Montreal Turnpike Trust.
2. Payments Municipality of Port Neuf.
3. Payments on account Protestant Burying Ground at Quebec.
4. Payments to Denys de la Ronde.

Mr. Courtney promised to send the particulars asked for.

The Conference adjourned *sine die*.

MEMORANDUM.

DEPARTMENT OF INDIAN AFFAIRS,
OTTAWA, 7th June, 1884.

To the Honourable,
THE PRIVY COUNCIL OF CANADA.

The undersigned begs to submit herewith a claim made by a band of Indians known as the Mississaguas of the Credit, who at one time occupied a reserve in the Township of Toronto, Ontario, but who subsequently removed to the Grand River, and are now settled upon lands in the Township of Onandaga, which form part of the Six Nations Indian Reserve.

The claim in question is for certain moneys which were received by the Crown Lands Department of the old Province of Canada, in payment for lands surrendered by these Indians in the year 1820 to be sold for their benefit, but which moneys were never placed to their credit.

Careful enquiry has been made into this matter and it has been ascertained that the claim of the Indians is a just one.

In the year 1858 the Special Commissioners who were appointed for that purpose of investigating Indian matters in the old Province of Canada, reported, with reference

to the Mississaguas band, that in 1828, there was a balance then due these Indians amounting to $8,303.50, together with interest thereon, and in comparing the total quantity of land in the Reserves which were surrendered, Oakville and Bronté, with the quantity ascertained to have been subsequently sold, the statement of the Commissioners as to the amount due in 1828, appears to be correct, and subsequently to that year the sales recorded of the lands at Port Credit is described in the surrender as Block F would appear to have produced the sum of $6,316.37, and the interest on this amount, calculated from the dates of the several sales at six per cent., amounts to $18,362.61, making a total sum due these Indians for sales at Port Credit, of $24,678.98.

With regard to the sales of lots in what was formerly known as the Bronté Reserve, and which is described as Block G in the surrender, it would appear from a statement received from the Crown Lands Department, that the amount collected from the purchasers was $2,218.25, upon which sum the interest at six per cent. from the date of sale, amounted to $6,069.73. The total amount, therefore, due these Indians on account of the lands last referred to is $8,287.98.

With regard to the lands at Oakville, which are described as Block B in the surrender, it is concluded from the papers and statements of record in the Department that the amount received therefor, viz., $4,080, is included in the amount stated by the Special Commissioners to have been due these Indians in 1828, as above described.

It will thus be seen that the several sums due these Indians are as follows:—

Block B.

Amount shown by the Commissioner's report of 1858, to be due in the year 1828:		
Principal	$ 8,303 50	
Interest	27,401 55	
		$35,705 05

Block F.

Amount shown by the statement from the Crown Lands Department, Toronto, to have been paid an account of sales:		
Principal	$ 6,316 37	
Interest	18,362 61	
		$24,678 98

Block G.

Amount shown to have been paid as per statement from Crown Lands Department:		
Principal	$2,218 25	
Interest	6,069 73	
		$8,287 98
Total		$68,672 88

The above interest is calculated up to the 31st December last on all the above amounts from the dates of the various sales, excepting on the amount reported by the Special Commissioners to have been due these Indians in 1828, upon which sum interest is calculated from the latter date.

Diligent search was made in the old books of account in the Department of Indian Affairs, and no record could be found of any of the above amounts having passed to the

credit of the Mississagua band aforesaid. A communication was then addressed to the Crown Lands Department of the Province of Ontario, requesting that this Department might be informed if there was any record in that Department of said moneys having been transferred to the credit of the Indians. A reply was received on the 6th ultimo, from the Crown Lands Department to the effect that the Indians were not credited with the proceeds of the sales of the lands in question, and that the amounts received were from time to time credited "to their respective services," as forming part of the general revenue of the Province, irrespective of the claims of the Mississagua Indians. In view of the facts above stated, the undersigned respectfully recommends that authority be given to transfer the amount above shown to be due these Indians from the Consolidated Revenue to the credit of Indian Funds, with a view to the Mississagua band receiving the benefit thereof; and of which they have been so long improperly deprived.

JOHN A. MACDONALD,
Superintendent-General of Indian Affairs.

REPORT OF MASTER OF TITLES.

Presented to the Legislature by command of the Lieutenant-Governor.

By Command,

A. S. HARDY,
Provincial Secretary.

PROVINCIAL SECRETARY'S OFFICE,
TORONTO, April 17th, 1887.

REPORT

OF

MASTER OF TITLES.

LAND TITLES' OFFICE,
TORONTO, March 23rd, 1887.

To His Honour the Hon. J. B. ROBINSON,
Lieutenant-Governor of Ontario.

SIR,—I have the honour to report as follows respecting the operation of *The Land Titles Act* in the County of York and City of Toronto during the past year. A very considerable volume of business has been done during the year, the land now under the Act being of the value of $1,200,539. In respect of this 906 instruments have been registered.

Up to the present date there have been altogether 102 applications, of which 79 have been granted. It is impossible to say how many of the remaining applications are to be considered as pending, as in a number of cases in which proof of certain necessary facts was required the parties have neither supplied the proof nor intimated that the applications are abandoned. Some of these, I have no doubt, are simply allowed to stand over as not requiring immediate attention, and the necessary evidence will be furnished, but in others it may be found difficult to get this evidence and the applicants may prefer not to incur the expense. As in the previous year, a very large proportion of applications is in respect of vacant properties in the City of Toronto or in the Township of York in the neighbourhood of the city, being properties which are being laid out into lots for early sale. The value of property under the Act, which may be considered as vacant, as it is held for building purposes and the buildings now thereon form a very small part of its value, is $662,989, while the value of improved property, including the buildings, amounts to $380,450.

The following table shows the number of transfers, charges, and transfers of charges, during the periods named :—

——	Transfers.	Charges.	Transfers of Charges.
From 1st July, 1885 (date of Act) to 31st December, 1885.....	None.	2	None.
From 1st January, 1886, to 31st December, 1886	231	233	8
From 1st January, 1887, to 23rd March, 1887	106	92	12

So far it is not found that landholders regard "possessory titles" with favour. It is obvious that a certificate, issued on a possessory title, can be of no value to a person purposing to sell at an early date, as it does not insure his having a marketable title,

while persons who have no intention of selling or mortgaging are unwilling, for a mere possessory title, to pay the one-quarter per cent. on the value, which, by the Act, is payable to the assurance fund on all applications. The fact that the title would, after a time, ripen into one not requiring investigation seems not to be regarded as a sufficient compensation for the present outlay.

Many of the titles submitted are of a character requiring a considerable amount of investigation and the furnishing of proof with regard to a number of facts outside of the registered deeds, and which frequently can only be satisfactorily obtained by sworn oral testimony.

While the Statutes were being revised I called the attention of the Commissioners to a number of minor amendments and several of an important character, which, it seemed to me, might with advantage be made, and such of them as were approved of have been embodied in the draft volumes of Revised Statutes submitted by the Commissioners to your Honour. Several of these are intended to prevent the possibility of doubt as to the effect of some of the provisions of the Act rather than because I deemed them to be absolutely required.

Charges given under the Act for considerable sums of money have been transferred to Insurance Companies and other investors, and, I have no doubt, that before long the preference given for securities based upon this kind of title will do much to extend it.

The system which I have adopted of examining the records at the Registry Offices, instead of requiring copies of the instruments to be produced, increases my labour to a very considerable extent, but the saving to applicants is so great, in view of the large number of instruments through which titles in and about Toronto are, as a general rule, traced, that I am satisfied no other course is practicable here. As the number of applications and the office registration work increase, this method may necessitate the appointment of searchers of title in accordance with the practice in the Australian colonies.

Only three applications have, during this year, been made regarding properties at any considerable distance from Toronto. One of these is in respect of land laid out as a summer resort on the Lake Shore, in the township of Etobicoke ; another is one in which a title under the Statute of Limitations is applied for, the property being situated in the township of North Gwillimbury ; the third is in the township of Vaughan.

I think there can be no doubt but as the advantages of the Act become practically known, many who are at present prevented from bringing their property under the Act by the expense which the proper investigation of a title necessarily entails, will feel it requisite to take advantage of it, as even now, in some cases, parties have refused to purchase unless a " Torrens Title " is given, though some, who had expected that the Act would make good bad titles at a nominal expense, have been disappointed.

J. G. SCOTT,
Master of Titles.

REPORT

Of the Secretary and Registrar of the Province of Ontario for the year ending 31st December, 1886.

Presented to the Legislative Assembly.

By Command.

ARTHUR S. HARDY,
Secretary.

PROVINCIAL SECRETARY'S OFFICE,
TORONTO, 18th April, 1887.

REPORT

OF THE

SECRETARY AND REGISTRAR

OF THE

PROVINCE OF ONTARIO,

FOR THE YEAR ENDING THE 31ST DAY OF DECEMBER,

1886.

To the Honourable John Beverley Robinson,
Lieutenant-Governor of the Province of Ontario, etc., etc., etc.

May it Please Your Honour:

The undersigned begs respectfully to present to Your Honour the Report prepared with respect to the chief transactions of the Department of the Secretary and Registrar of the Province of Ontario during the year ending the 31st day of December, 1886.

ARTHUR S. HARDY,
Secretary and Registrar of the Province of Ontario.

Provincial Secretary's Office,
Toronto, 18th day of April, 1887.

PROVINCIAL SECRETARY'S OFFICE,
TORONTO, 18th April, 1887.

To the Honourable
ARTHUR STURGIS HARDY, Q.C., M.P.P.,
Secretary of the Province of Ontario.
etc., etc., etc.

SIR,—I have the honour to submit for your information my annual statement with reference to the chief transactions of this Office during the year ending 31st day of December, 1886.

The Office Register and the Fyles of the year show an increased volume of correspondence as compared with the previous twelve months. During 1886, six thousand and ninety-seven letters and despatches were received, and five thousand seven hundred and thirty-four letters and despatches written. This correspondence was in respect of the three thousand five hundred and seventy-five new subjects dealt with during the year, and does not include many letters received or written in connection with subjects which originated in other years.

With a view to the due consideration of the new subjects mentioned, two thousand eight hundred and ninety-nine references were made to the other Departments of the Government. Upon these references, two thousand six hundred and eighty-nine reports were received and acted upon.

An exact daily record of the references made, the reports received, and of the correspondence of the office is now kept.

The following is a synopsis of the routine work of the office during the year 1886 :—

Twenty-six thousand two hundred and fifty-four Marriage Act Forms were supplied to Issuers throughout the Province, from whom the sum of $2,635.40 was received in fees.

Two hundred and twenty-seven Commissions under the Great and Privy Seals were prepared in this office and issued.

Warrants under the Hand and Seal of His Honour the Lieutenant-Governor were issued for the removal from the County Gaols to the Asylums of three hundred and fourteen persons committed thereto, and found on examination to be insane and dangerous to be at large. The various Medical Superintendents of Asylums having reported the recovery of eighty patients, warrants directing their discharge were issued. In the course of the year, some thirty individuals committed to gaol on the ground of insanity were discharged from custody by order of the Lieutenant-Governor, or by the Sheriffs, acting upon the certificates of the respective Gaol Surgeons, who certified to the sufficient recovery of the said individuals to warrant their release.

The usual supply of blank forms for the returns required by various acts of Municipal clerks, the Executive Officers of Joint Stock Companies and others, was printed and distributed, and a large number of returns received, acknowledged and fyled for public reference.

Five hundred and thirty-five appointments to office were gazetted.

Eleven Proclamations by His Honour the Lieutenant-Governor, as mentioned below, were also gazetted :—

(1) To offer a reward for the apprehension of the murderers of one Mary Scott, of the Township of Thorold, in the County of Welland.

(2) To re-divide the Town of Listowel into five wards.

(3) To re-divide the Wards of St. Stephen and St. Mark in the City of Toronto.

(4) To attach certain portions of the Township of York to the City of Toronto.

(5) To re-divide the Town of Petrolia into four wards.

(6) To erect the Village of Aylmer into a Town.

(7) To attach to the Town of Smith's Falls certain portions of the adjoining Townships of South Emsley, Montague and Wolford.

(8) To bring into effect upon the first day of December, 1886, "The Act for the Protection of persons employed in Factories."

(9) To attach to the City of Ottawa as a Ward the adjoining Village of New Edinburgh.

(10) To dissolve the Legislative Assembly of the Province, and to direct the election of a new Assembly.

(11) To change the date upon which the said election of a new assembly was, by the last mentioned Proclamation, fixed to be held.

One hundred and nineteen Public Notices, with respect to the incorporation by Letters Patent of Joint Stock Companies and of the issue of Supplementary Letters Patent, were gazetted.

Letters Patent under the Ontario Joint Stock Companies Act were granted to ninety companies, whose capital, in the aggregate, amounted to four million four hundred and sixty thousand dollars. A detailed list of these companies appears elsewhere.

Fourteen Supplementary Letters Patent were also granted for the purpose of confirming by-laws increasing the capital of certain companies ; for subdividing existing shares, for changing corporate names, for reducing capital, or for other purposes.

Thirty-six returns to Addresses or Orders of the Legislative Assembly, as well as many Reports, were brought down and laid on the Table of the House.

The fees received by this office during the year amounted to six thousand nine hundred and fort-seven dollars and forty cents.

Appendix I. to my Report is a Comparative Statement for the years 1868, 1871, 1884, 1885 and 1886, shewing the work done in this office during those years.

Appendix II. is a detailed statement of fees received during the year and the service rendered therefor.

Appendix III. is a list of the Letters and Supplementary Letters Patent issued in 1886, under the provisions of The Ontario Joint Stock Companies Letters Patent Act.

Appendix IV. is a synopsis of Returns to Addresses of the House presented to the Legislative Assembly during the Session of 1886.

In addition to this Report, the following Reports from this Department have this Session been laid on the Table of the House :—

Nineteenth Annual Report of the Inspector of Prisons and Public Charities on the Asylums for the Insane and the Asylums for Idiots of Ontario, for the year ending 30th September, 1886.

Nineteenth Annual Report of the Inspector of Prisons and Public Charities upon the Common Gaols, Prisons and Reformatories of Ontario for the year ending 30th September, 1886.

Sixteenth Annual Report of the Inspector of Prisons and Public Charities upon the Ontario Institution for the Education and Instruction of the Deaf and Dumb, Belleville, for the year ending 30th September, 1886.

Fifteenth Annual Report of the Inspector of Prisons and Public Charities upon the Ontario Institution for the Education and Instruction of the Blind, Brantford, for the year ending 30th September, 1886.

Seventeenth Annual Report of the Inspector of Prisons and Public Charities upon the Hospitals of Ontario for the year ending 30th September, 1886.

Seventeenth Annual Report of the Inspector of Prisons and Public Charities upon the Houses of Refuge and Orphan and Magdalene Asylums aided by the Province of Ontario, for the year ending 30th September, 1886.

Report, for 1885, of the Registrar-General.

Report of the Provincial Secretary upon the working of the Tavern and Shop Licenses Act for 1886.

Report of the Inspector of Division Courts, for 1886.

Report of the Department of Immigration, for 1886.

All of which is respectfully submitted.

G. E. LUMSDEN,

Assistant Provincial Secretary.

APPENDIX I.—The following is a Comparative Statement for the years 1868, 1871, 1884, 1885 and 1886, showing the work done in the Secretary's Office.

WORK DONE.	1868.	1871.	1884.	1885.	1886.
Number of Fyles	1,172	1,264	3,543	3,490	3,575
Letters received	2,107	1,690	5,567	5,282	6,097
Letters sent	1,667	1,280	5,313	4,938	5,734
References to other Departments	482	912	2,318	2,293	2,899
Reports from other Departments	256	470	1,257	1,655	2,689
Circulars sent	240	60	300	150	200
Warrants for removal, transfer or discharge of lunatics	34	195	353	359	394
Statutory Returns received, entered and fyled, or transferred to other Departments	52	58	3,200	2,050	1,000
Notarial Certificates prepared and issued	48	72	91	106	93
Letters Patent issued to Joint Stock Companies	19	26	92	98	90
Supplementary Letters Patents to Joint Stock Companies	.....	.....	10	13	14
Marriage Licenses, Certificates and Affidavits issued	.....	.....	27,816	27,738	26,254
Printed forms *re* lunatics distributed to sheriffs	.....	.....	1,700	1,920	2,000
Other printed forms distributed for Municipal, Joint Stock Companies, and other returns	.....	.....	3,600	3,920	3,350
Commissions under Great and Privy Seals	135	190	309	322	227
Total fees received by Secretary's Office	$1,938	$2,282	$7,299	$7,294	$6,947 40
Ontario Gazette—					
Proclamations published	.....	16	31	33	13
Appointments gazetted	110	149	481	445	535
Public Notices:					
(*a*) Of Incorporation of Joint Stock Companies	13	57	107	123	119
(*b*) Of increase of Stock of Joint Stock Companies, and					
(*c*) Other Public Notices					

APPENDIX II.—The following Table is a detailed Statement of Fees received and the Services rendered therefor.

	Number.	January.	Number.	February.	Number.	March.	Number.	April.	Number.	May.	Number.	June.	Number.	July.	Number.	August.	Number.	September.	Number.	October.	Number.	November.	Number.	December.	Total number.	Total amount.
		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.		$ c.
Commissions—Coroners'..at $13 00	1½	*18 50	..	.....	2	26 00	2½	32 50	..	.....	1	13 00	1	13 00	..	.....	..	....	..	.....	1	13 00	..	.....	9	116 00
do Notaries Public.....at 8 00	6	48 00	13	104 00	6	48 00	7	56 00	6	48 00	17	136 00	3	24 00	8	64 00	11	88 00	9	72 00	11	88 00	4	32 00	101	808 00
Other Commissions under Great and Privy Seals .. 13 00	2	26 00	1	13 00	3	39 00	2	26 00	2	26 00	1	13 00	3	39 00	1	13 00	1	13 00	..	.....	..	.....	..	.....	16	208 00
Ferry Licenses..... 15 00	...	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	1	.....	..	.....	..	.....	..	.....	..	.....
Superior Court Certificates 4 00	...	....	3	12 00	3	12 00	..	.....	..	.....	2	8 00	..	.....	..	.....	1	4 00	3	12 00	5	20 00	1	4 00	18	72 00
County Court do 2 50	...	....	..	....	1	2 50	1	2 50	..	.....	1	2 50	..	.....	..	.....	..	.....	..	.....	..	.....	1	2 50	4	10 00
Surrogate Court do 2 00	1	2 00	1	2 00	..	.....	1	2 00	1	2 00	..	.....	..	.....	..	.....	..	.....	..	.....	1	2 00	..	.....	5	10 00
Judicial Notarial Certificates 1 00	10	10 00	17	17 00	9	9 00	6	6 00	3	3 00	4	4 00	11	11 00	5	5 00	11	11 00	6	6 00	..	.....	11	11 00	93	93 00
Companies' By-laws, etc... 5 00	...	.....	..	.....	..	.....	..	.....	..	.....	1	5 00	..	.....	2	10 00	1	5 00	2	10 00	..	.....	..	.....	6	30 00
Licenses to Companies 20 00	...	.....	..	.....	..	.....	1	20 00	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	1	20 00
Change of name 25 00	...	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....
Charters of Incorporation.. 10 00	2	20 00	6	60 00	7	70 00	5	50 00	4	40 00	2	20 00	4	40 00	3	30 00	2	20 00	2	20 00	1	10 00	3	30 00	41	410 00
do (Special).. 15 00	...	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	1	15 00	..	.....	..	.....	1	15 00
do .. 25 00	...	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	1	25 00	..	.....	..	.....	1	25 00	2	50 00
do .. 30 00	4	120 00	..	.....	1	30 00	3	90 00	5	150 00	3	90 00	2	60 00	4	120 00	1	30 00	6	180 00	2	60 00	3	90 00	31	1,020 00
do .. 40 00	2	80 00	..	.....	..	.....	1	40 00	..	.....	1	40 00	2	80 00	..	.....	1	40 00	4	160 00	1	40 00	..	.....	12	480 00
do .. 50 00	2	100 00	..	.....	..	.....	1	50 00	..	.....	..	.....	..	.....	2	100 00	..	.....	3	150 00	2	100 00	1	50 00	11	550 00
do .. 60 00	1	60 00	1	60 00	1	60 00	..	.....	..	.....	..	.....	1	60 00	..	.....	..	.....	2	120 00	..	.....	1	60 00	7	420 00
Marriage Licenses.....	...	172 00	..	171 00	..	300 00	...	187 20	..	146 00	..	254 00	..	120 00	..	153 20	..	220 00	..	283 00	..	267 00	..	362 00	...	2,635 40
	31½	656 50	42	439 00	33	596 50	30½	562 20	21	415 00	33	585 50	27	447 00	25	495 20	30	456 00	38	1028 00	24	600 00	26	666 50	361	6,947 40

* Both Commissions issued to one Coroner, who remitted $18.50 instead of $19.50.

APPENDIX III.—Detailed Statement of the Joint Stock Companies incorporated by Letters Patent under R. S. O., Cap. 150, during the year 1886.

NAME OF COMPANY.	Number of Shares.	Amount of each Share.	Capital.
		$ c.	$ c.
The Smith's Falls Electric Light Company	100	100 00	10,000 00
The L. H. Thomas Company of Windsor	1,000	100 00	100,000 00
The Petrolea Masonic Temple Company	800	25 00	20,000 00
The Kingston Electric Light Company	120	25 00	3,000 00
The Conger Coal Company of Toronto	500	100 00	50,000 00
The Dodge and Bliss Box Company	250	100 00	25,000 00
The Toronto Land and Investment Corporation	10,000	50 00	500,000 00
The Auxiliary Publishing Company	1,000	100 00	100,000 00
The North Middlesex Cheese Manufacturing Company	250	10 00	2,500 00
The Brantford Electric Light Company	300	100 00	30,000 00
The Chas. Rogers and Sons Company of Toronto (Limited)	1,000	100 00	100,000 00
The Mutual Implement Manufacturing Company	500	100 00	50,000 00
The Horning's Mills Building and Improvement Company (Limited)	300	10 00	3,000 00
The Oddfellows' Building Association of Whitby	170	50 00	8,500 00
The D. A. Jones Company (Limited) of Beeton	400	100 00	40,000 00
The Cedar Vale Cheese Manufacturing Company of Ontario	220	10 00	2,200 00
The Essex Centre Printing Company	30	100 00	3,000 00
The Toronto Syrup Company	3,000	100 00	300,000 00
The City Delivery Service of Toronto	20	100 00	2,000 00
The Byng Evaporator Supply Company	100	10 00	1,000 00
The Niagara Falls Liberal Club	200	10 00	2,000 00
The Hamilton Building Contract Company	600	5 00	3,000 00
The Whitechurch Cheese and Butter Manufacturing Company	167	15 00	2,505 00
The Egremont Butter and Cheese Manufacturing Company	200	10 00	2,000 00
The *Dufferin Post* Printing Company (Limited)	100	25 00	2,500 00
The Preston Driving Park Association	36	50 00	1,800 00
The Hamilton Base Ball Association	100	50 00	5,000 00
The Wallaceburg Cheese and Butter Company	500	6 00	3,000 00
The Ripley Creamery Company	400	5 00	2,000 00
The *Mirror* Publishing Company of Toronto	120	25 00	3,000 00
The County of Ontario Central Agriculture and Live Stock Association	1,200	10 00	12,000 00
The *Thunder Bay Sentinel* Printing Company	400	25 00	10,000 00
The Glen Cheese Factory Company of Huntingdon	400	5 00	2,000 00
The McArthur Bros. Company	5,000	100 00	500,000 00
The Georgian Bay Island Resort Company	1,000	25 00	25,000 00
The Toronto Dental Manufacturing Company	500	100 00	50,000 00
The North Anderdon Shooting Club	60	50 00	3,000 00

DETAILED STATEMENT of the Joint Stock Companies incorporated, etc.—*Continued.*

NAME OF COMPANY.	Number of Shares.	Amount of each Share.	Capital.
		$ c.	$ c.
The Brook and Warwick Union Cheese and Butter Company (Limited)	200	10 00	2,000 00
The Napanee Water and Electric Light Company	100	100 00	10,000 00
The Wingham Salt Well Company	200	10 00	2,000 00
The Union Hall Company of Rockwood	300	10 00	3,000 00
The Southampton Mineral Water and Bath Company	150	10 00	1,500 00
The Wolverton Milling Company	800	50 00	40,000 00
The Queen City Driving Club of Toronto (Limited)	200	25 00	5,000 00
The Harold Cheese Manufacturing Company	500	5 00	2,500 00
The Ontario Grain and Seed Company	350	100 00	35,000 00
The Ontario Lacrosse Company	300	10 00	3,000 00
The Lindsay Canoeing and Rowing Club	100	10 00	1,000 00
The Ashworth Manufacturing Company (Limited)	500	100 00	50,000 00
The St. Catharines' Driving Park Association	1,000	10 00	10,000 00
The Coal Cartage Company of Ottawa	150	100 00	15,000 00
The Crosshill Creamery Company	100	10 00	1,000 00
The Galt Electric Light and Power Company (Limited)	1,500	20 00	30,000 00
The Toronto and Lorne Park Summer Resort Company	200	100 00	20,000 00
The Niagara Falls, Wesley Park and Clifton Tramway Company	1,000	50 00	50,000 00
The Simcoe Driving Park Association	200	10 00	2,000 00
The *Sarnia Canadian* Printing Company	500	50 00	25,000 00
The Central Press Agency of Toronto	20	100 00	2,000 00
The Williams, Greene and Rome Company of Berlin (Limited)	600	100 00	60,000 00
The Berlin and Waterloo Street Railway Company	800	50 00	40,000 00
The Listowel Agricultural and Exhibition Association	120	25 00	3,000 00
The Union Creamery Company (Limited) of Bethany	150	10 00	1,500 00
The St. Thomas Featherbone Company (Limited)	2,000	10 00	20,000 00
The Shelburne Turf Association	600	5 00	3,000 00
The Stratford Rink Company	300	20 00	6,000 00
The Trading and Factory Company of Toronto	1,000	100 00	100,000 00
The Glen Grove Club	120	25 00	3,000 00
The Medical School Property Company of Toronto	750	40 00	30,000 00
The Storrington Mining Company	300	100 00	30,000 00
The Orillia Driving Park Association	30	100 00	3,000 00
The Union Stock Yards and Abattoir Company of Toronto	1,000	100 00	100,000 00
The Eden Mills Co-operative Creamery Company	30	50 00	1,500 00
The Kingston Business College (late Dominion Business College)	60	50 00	3,000 00
The Polson Iron Works Company of Toronto (Limited)	600	100 00	60,000 00

The Windsor Electric Street Railway Company	600	50 00	30,000 00
The Adjuda Quarry Company	1,500	100 00	150,000 00
The Collingwood Dry-dock Shipbuilding and Foundry Company (Limited)	600	100 00	60,000 00
The Manitoulin Oil Company (Limited)	1,000	50 00	50,000 00
The Oakville Leather Company (Limited)	120	100 00	12,000 00
The Kalbfleff Yeast and Vinegar Company of Toronto (Limited)	250	100 00	25,000 00
The American Rattan Company of Toronto	1,000	100 00	100,000 00
The London Crockery Manufacturing Company	1,000	50 00	50,000 00
The Beaver Mining and Milling Company of Ontario	100,000	10 00	1,000,000 00
The Knights of Labour Biscuit and Confectionery Company, Chatham (Limited)	3,000	10 00	30,000 00
The Paris Fabric Trimmer Company	4,000	5 00	20,000 00
The Victoria Harbour Lumber Company	1,000	100 00	100,000 00
The Toronto Conservatory of Music	500	100 00	50,000 00
The Thornbury Oil and Mining Company	1,500	20 00	30,000 00
The Toronto Grate Bar Company	1,000	50 00	50,000 00
The London Grocers' Supply Company	300	500 00	150,000 00
Total			4,466,005 00

SUPPLEMENTARY LETTERS PATENT.

1st. Subdividing the shares and increasing the capital of "*The Budget*" Printing and Publishing Company of Toronto, from $8,000 to $25,000.

2nd. Changing the Corporate name of The Preston Shoddy Company to that of The Atlas Woollen Company, of Toronto.

3rd. Changing the name of The County of Ontario Central Agricultural and Live Stock Association to that of The Ontario Central Agricultural and Live Stock Association of Port Perry.

4th. Decreasing the capital of John Stuart, Son, and Company (Limited), from $150,000 to $100,000.

5th. Re-incorporating The Toronto Liederkranz.

6th. Re-incorporating The Waterloo Woollen Manufacturing Company, and increasing the capital of the Company from $25,000 to $100,000.

7th. Sub-dividing the shares of The Armow Creamery, Cheese and Butter Company.

8th. Increasing the capital of The Oil Exchange Financial Association of Petrolia, from $150,000 to $300,000.

9th. Increasing the capital of The Horse Breeders' Association of Welland, from $3,000 to $7,000.

10th Increasing the capital of The Essex Centre Manufacturing Company, from $50,000 to $100,000.

11th. Increasing the capital of The Toronto Base Ball Association, from $5,000 to $10,000.

12th Increasing the capital of The Trent Valley Woollen Manufacturing Company, of Campbellford, from $150,000 to $300,000.

13th Increasing the capital of The Granite Curling and Skating Company, from $12,000 to $50,000.

14th Increasing the capital of The Dominion Organ and Piano Company, from $50,000 to $500,000.

APPENDIX IV.—Synopsis of Returns to Addresses of the House presented to the Legislative Assembly during the Session of 1886.

No.	Sessional Papers.	Subject.	Mover.
1	No. 21	Correspondence between Minister of Education and Universities, and Orders or Regulations, and Statutes or By-laws adopting simultaneous co-examination	Mr. Morris.
2	" 25	Shewing plans of School buildings, and any system of lighting, heating and ventilation approved by the Education Department	Mr. Gibson (Hamilton).
3	" 29	Number of Farmers' Institutes in the Province, and number of lectures delivered to same by Professors of the Agricultural College	Mr. Graham.
4	" 30	Amount due by Township of Hope to Municipal Loan Fund, and agreement between the Township and Provincial Treasurer regarding payment	Mr. Preston.
5	" 32	Amount of indebtedness of municipalities to the Government over one year in arrears, principal and interest	Mr. Ferris.
6	" 37	Correspondence between Governments of Ontario, the Dominion and Quebec, respecting settlement of account between them. Amount which interested municipalities should receive from Land Improvement Fund in connection with School Lands	Mr. Creighton.
7	" 39	Number and amount of certificates of Railway Annuities for scrip during 1885. Date of sale, etc.	Mr. Carnegie.
8	" 40	Amounts due on account of Public Service unpaid on 1st January, 1886, classed as in Public Accounts	Mr. Carnegie.
9	" 41	Information regarding Ontario Agricultural College and Farm: 1st. As to cash receipts; 2nd. Amounts due for board, etc.; 3rd. Number of horses and other animals which died or were destroyed in 1882-3-4; 4th. General Statement as to stock in these years; 5th. Outstanding claims; 6th. Quantity and value of food for stock, etc.; and 7th Number of cows, ewes and sows for breeding, etc	Mr. Carnegie.
10	" 45	Correspondence between the Ontario and Dominion Governments, or between the former and any corporation relating to ownership of Dundas and Waterloo Macadamized roads	Mr. Young.
11	" 46	Cost of enforcing Canada Temperance Act in Halton, in 1882-3-4; also the number of convictions quashed, and how.	Mr. Kerns.
12	" 48	Payments or decisions in High Court as to liability of Railway Companies for accidents to workmen	Mr. Meredith.
13	" 51	Correspondence between the Government and authorities of Universities and Colleges, relating to Federation	Mr. Mulholland.
14	" 52	Local mills east of Bobcaygeon Road, to which lumber was allowed under local mill regulations; quantity allowed to each, and Orders in Council in connection therewith	Mr. Wood.

SYNOPSIS of Returns, etc.—*Continued.*

No.	Sessional Papers.	Subject.	Mover.
15	No. 53	Petition of William Hardman & Bros., for license as assignee of one Richard McConnell, for vacant space on Amable Du Fond and Amable Du Fond Branch of the Petawawa; Correspondence, Reports and Orders in Council relating thereto; amount paid for ground rent and license, etc	Mr. Carnegie.
16	" 55	Information concerning lots in Asphodel, Douro and Otonabee Townships, Peterborough County, the arrearages on which have been reduced or remitted since January 1st, 1881	Mr. Carnegie.
17	" 56	Shewing the title of the Province to the parcel of land known as Government House	
18	" 58	Amount expended on Northern Colonization Roads in Gladstone Township since 1881, etc	Mr. Meredith.
19	" 59	Correspondence, etc., regarding the swine plague in Essex County	Mr. Balfour.
20	" 61	Lots in Township of Livingstone under license to cut timber, to John Ludgate in August, 1884; lots in lieu of which license of 1884 was issued; and correspondence, reports and Order in Council as to exchange of territory effected.	Mr. Carnegie.
21	" 62	Marsh lands sold in Township of Walsingham; to whom sold and number of acres in each case	Mr. Morgan.
22	" 65	Number of applications for registration during 1885 under Land Titles Act; cost of each application; number of certificates granted, etc	Mr. Harcourt.
23	" 66	Names and salaries of the officers of Toronto University, also names and salaries of Professors, Tutors, Fellows and Officers of University College	Mr. Balfour.
24	" 67	Average yearly attendance of pupils at Upper Canada College; localities from which they came, and conditions respecting entrance	Mr. Bishop.
25	" 70	Total number of students attending lectures at University College, and number of students in residence during academic year 1884-85, etc	Mr. Balfour.
26	" 72	Arrangement between Supreme Court and Toronto General Trust Company, and amount of money lent to and loaned out by the Company thereunder	Mr. White.
27	" 73	Number of convicts in Central Prison, the kind of work, the number employed at each, and daily earnings of each convict	Mr. Ermatinger.

28	No. 75	Correspondence between Governments of Canada and Ontario, Orders in Council and papers relative to proceedings of persons in Canada and the United States, respecting claims on the Townley or Lawrence Townley estates in England	Mr. McLaughlin.
29	" 76	Money received and expended by Agriculture and ArtsAssociation for years 1883, 1884, 1885 ; Salaries paid officials, and balance sheet for each year's transactions	Mr. Awrey.
30	" 80	Judgment given by Hon. Mr. Justice Proudfoot in McArthur *v.* Queen, and correspondence and Orders in Council relating to timber limit in question	Mr. Meredith.
31	" 81	Number of men, widows and unmarried women who voted at municipal election of 1885-6, with number of male and female votes respectively on voters' lists of each municipality in Province	Mr. Graham.
32	" 82	Number of persons in each County committed to gaol by County Court Judges in 1884, 1885, for default of payment under order of Division Court	Mr. Harcourt.
33	" 83	Correspondence in relation to the increase of the capital stock of the Massey Manufacturing Company	Mr. Ermatinger.
34	" 84	Rules and regulations in force at University of Toronto with regard to admission of visitors to Library, Museum and Tower	Mr. Bishop
35	" 86	Statute of Western University, establishing a Faculty of Law, and Order in Council disallowing the same ; correspondence relative thereto, etc	Mr. Meredith.
36	" 87	Relating to the publication of the Ontario Readers and Drawing Books; the names of all text books authorized or in preparation ; payments for compiling, preparing or publishing each of said books, all correspondence in connection therewith, and the subjects in which new text books have been authorized	Mr. Morgan.

PROVINCIAL REGISTRAR'S OFFICE,

TORONTO, 20th April, 1887.

SIR,—I have the honour to submit for your information a statement of the work done in the Registrar's Branch of the Provincial Secretary's Department, from 1st January, 1886, to 31st December, 1886.

I have the honour to be, Sir,

Your obedient servant,

JOHN F. C. USSHER,

Deputy Registrar.

To the Hon. A. S. HARDY, Q.C,

Provincial Secretary.

A CONDENSED STATEMENT showing the work done in the Registrar's Branch of the Department of the Provincial Secretary from 1st January, 1886, to 31st December, 1886.

DOCUMENTS.	Recorded.	Indexed.
Commissions, Great Seal	109	109
Commissions, Privy Seal	113	113
Special Commissions	5	5
Letters Patent, Incorporating Companies	89	89
Letters Patent, Supplementary	14	14
Bonds and Covenants	33	33
Certificates, P.L.S.	10	10
Warrants removing Lunatics	314	314
Warrants discharging do	80	80
License Commissioners' Commissions	110	110
Inspectors' Commissions	39	39
Election Writs	86	86
Letters of Administration	2	2
LAND PATENTS.		
Crown Land Sales	525	525
Free Grants	596	596
Mining Patents	196	196
Special Deeds and Surrenders	31.	31

I addition to the foregoing, an Annual Return of all Bonds and Securities recorded in this Department is prepared for the Legislative Assembly, and a Quarterly Return of all the lands is also sent to the Registrar of each County in which patents have issued, giving description of land patented, name of patentee, etc. Two hundred and seventy-five letters were sent and twenty copies of patents issued.

JOHN F. C. USSHER,

Deputy Registrar.

(No. 63).

Return shewing when the vacancy in the office of the Clerk of the Division Court at Picton occurred. (*Not printed*).

RETURN

To an Order of the Legislative Assembly, dated 1st April, 1887, shewing the number of cases brought before E. B. Borron, Stipendiary Magistrate for Northern Nipissing, for adjudication during each year of his appointment; and shewing also the other duties performed by him in each year.

Presented to the Legislative Assembly,

A. S. HARDY,
Secretary.

PROVINCIAL SECRETARY'S OFFICE,
TORONTO, 21st April, 1887.

(*Mr. Creighton.*)

OBSERVATIONS AND REMARKS, EXPLANATORY OF THE ACCOMPANYING RETURNS.

It will be seen that no cases have been brought before me in my official capacity as Stipendiary Magistrate.

In explanation of this apparently singular circumstance, I beg respectfully to point out (as stated in my first report), that the people of this part of the Territory are almost without exception entirely dependent on the Hudson's Bay Company, if not for the necessaries of life, at all events for the means of obtaining them; that in many cases they are unable to leave the country without the assistance of the Company, and that in others they would rather submit to any punishment short of death than do so. Under these circumstances, which are unavoidable so long as the country is shut out from all intercourse or means of communication with the outside world, the condition of the people at Moose Factory, and other places similarly situated, is one of absolute dependence, and that of the Company's officers, one of absolute authority. Although this authority is arbitrarily exercised, and liable to be abused when in unworthy hands, it partakes more generally of a paternal character, and is, I think, rarely abused. That their government has been wonderfully successful in ensuring the safety of the persons and property of our own race, and even of the natives, and has maintained peace and good order at their posts, is unquestionable. This, with the fact that at Moose Factory and elsewhere on the coast, church missions have been established and doing good work for many years, and that the people (both European servants of the Company and natives) are, with few exceptions, remarkably quiet, peaceable and well-behaved, accounts in a great measure for the absence of crime.

In view of this state of things, and the fact that our claim to this part of the territory has been, and still is, disputed, as well as for other reasons, I was thoroughly convinced that any attempt on my part, to meddle or interfere *unnecessarily*, would be exceedingly injudicious. The effect of such interference would have been to weaken the only real power or authority in that part of the territory, without the ability (under the peculiar circumstances) to substitute any other in place of it. With the moral support and material assistance of the chief officers of the Company, the administration of justice, according to our ideas and methods, might have been practicable, but not otherwise. I did not, however, think that I had any great reason or right to expect such assistance and support, while on the other hand I had reason to believe that the chief officers looked with no very favorable eye on the location of a Stipendiary Magistrate, or the establishment of a Court of any kind at Moose Factory. They naturally regarded it as the first step toward the opening up of the country and the influx of rival traders, and injurious in the highest degree to the interest, not only of the Company, but of themselves, as introducing disturbing elements, and a new order of things which they thought (as I readily perceived) would not even promote the welfare or happiness of the people of the country generally.

In view, therefore, of all these circumstances, I concluded that, while in the event of a murder or other serious crime, it would be my duty to assist in bringing the criminals to justice; that in other matters, more particularly in misunderstandings and disputes between the Hudson's Bay Company's officers and servants, it would be better, if not in the interests of all parties, that I should not interfere, or attempt to interfere, in my judicial capacity, nor at all events until such cases were brought before me in regular form. As stated in the foregoing returns, nothing of the sort has so far been brought before me. I may have been right, or may have been wrong, in this conclusion. It is, of course, one which admits of differences of opinion; but I am fully persuaded that my attitude and course, in respect of this matter, will meet with the approval of all those

who are most intimately acquainted with the social and other conditions of the country and people.

As regards the other duties alluded to in the Returns, I may observe that, when appointed to my present position, I was informed by the Honourable Attorney-General, that, in addition to the duties of Stipendiary Magistrate, I should be expected "*to procure* "*and forward information*, and to advise and assist in settling all matters relating to our "new territory."

Now, when we consider that the territory here alluded to is the size of England and Wales, having an area of something like 60,000 square miles, for the most part an almost "unknown land," and that it was of the very greatest importance that the Provincial Government should be informed in regard of the resources and value of this new territory, as well as in regard of the best methods of opening it up, and of developing its resources, it will, I think, be conceded on all hands that, to procure such information, and to qualify myself to give such advice and assistance as were expected of me, was a sufficiently arduous undertaking—one involving a great deal of hardship, of thought, and of labour, and withal only to be accomplished by a man in some measure specially qualified for the work. That I have at all events endeavoured to perform this part of my duty may not unreasonably be inferred, from the fact that, to this end, I have travelled upwards of 17,000 miles, of which nearly 8,000 miles have been done in birch-bark canoes, and some 400 in open boats. In the prosecution of my voyages and explorations, no fewer than 750 portages, varying from a few chains to six miles in length, have been made; and that, between these and excursions back from the rivers, I have, in addition, walked many hundred miles on foot.

As for the particulars of the work done, it is impossible to enumerate these in the compass of an ordinary Return of the kind asked for, I must simply refer to my reports to supplement in some measure the returns sent in.

That any mere lawyer, or ordinary Stipendiary Magistrate could, or would have performed these *other duties* which have devolved upon me, is not, to say the least, at all probable. Nor, in view of the whole circumstances of the territory, do I think most explorers (in the common acceptation of the term) could have done them better, if so well, as I have done; for my education and antecedents qualified me in a more than ordinary degree for the performance of this part of my duty. But even looked at simply in the light of the actual labour (not to say hardship) involved, I think that, merely outlined as it is in the accompanying returns, it will compare favourably with the time occupied and labour performed by any other Stipendiary Magistrate (Dominion or Provincial) in the North-West.

Respectfully submitted,

E. B. BORRON,
Stipendiary Magistrate, etc., etc.

RETURN.

A RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING, IN THE YEAR 1879; AND SHEWING ALSO THE OTHER DUTIES PERFORMED BY HIM.

No cases brought before him this year.

OTHER DUTIES PERFORMED.

In accordance with instructions from the Honourable the Attorney-General, I proceeded to Moose Factory, James' Bay, *via* French River, Lake Nipissing, Mattawa, Lake Temiscamingue and Upper Ottawa, to the Height of Land, crossing which, the river Abittibe was followed to its junction with the river Moose, a few miles above the Factory or Post.

Remained two months at Moose Factory, procuring all the information, I honourably could, in reference to the territory. Finding it impossible to administer justice under the circumstances, and that there was an indisposition on the part of the Hudson Bay Company's officers and servants to afford information, or to furnish me with the means of obtaining it otherwise, under the impression that such might be injurious to the interest of the Company, I concluded to return and report, before the navigation closed.

Left Moose Factory on 19th of September, and returned by the Moose River and Michipicoten River route to Lake Superior, and thence to Manitowaning. Time occupied on this trip, five months. Total distance travelled, 1,500 miles; nearly 1,000 of which were by canoe.

Wrote and supervised printing of Report in Toronto.

E. B. BORRON.

A RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING, IN THE YEAR 1880; AND SHEWING ALSO THE OTHER DUTIES PERFORMED BY HIM IN THAT YEAR.

No cases brought before me.

OTHER DUTIES PERFORMED.

Left Toronto, on the opening of navigation, to proceed again to Moose Factory, having obtained the permission of the Government to do so, and to take with me such men and supplies as would render me comparatively independent, and thus enabled to examine the country around that Post.

I followed the Michipicoten route, and arrived at Moose Factory on the 22nd of June. From this point, as a base, various expeditions were undertaken, with the view to determining the character and resources of the country.

1st. Expedition up the Jigawa, to explore the country lying between the Moose and Albany Rivers; left on the 26th June, and returned on the 9th of July.

2nd. Expedition up the Abettibe River to New Post, to examine the country in that section; left on the 12th July, and returned to Moose Factory on the 29th of July.

3rd. Expedition along the coast of James' Bay to Rupert's House and Carleton Island, partly to examine the land, but chiefly the harbours; left Moose on the 30th July, and returned on the 20th of August.

4th. Started on my homeward trip on the 25th August, and proceeding up the Abittibe to the Height of Land, and examined the country at many points. Crossing the watershed, I followed the usual route to Temiscamingue Post; thence up a branch of the Montreal River to Lake Temagaming; thence down river to Lake Nipissing; thence down French River to Lake Huron; thence to Manitowaning, which was reached on the 28th of September, and thereafter to Toronto.

Time occupied on this trip, five months; distance travelled, 2,580 miles, of which 1,520 miles were by canoe, 400 miles in open boat, and 660 by steam; portages, 105 in number, of which the longest was six miles.

Wrote and superintended printing of Report in Toronto.

E. B. BORRON.

A RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING, IN THE YEAR 1881; AND SHEWING ALSO THE OTHER DUTIES PERFORMED BY HIM IN THAT YEAR.

No cases brought before me.

OTHER DUTIES PERFORMED.

Owing to circumstances fully mentioned in my report, it was the latter end of May before I was able to leave Toronto this year to visit the principal Posts, and resume my explorations in the territory. After considerable trouble and delay in obtaining *voyageurs* and canoes, I started inland from Michipicoten on the 20th of June, and arrived at Missinaibe Post on the 25th. This Post is about thirty miles north of the Height of Land, and in the territory claimed by Ontario. Here I remained two days, during which (having been appointed Assistant Census Commissioner), I took the census, and obtained a guide and *voyageurs*. I left this on the 29th June for Flying Post, also, in this territory, and about sixty-five miles south-east, but double that distance by the canoe route. Flying Post was reached on the 8th of July, after a laborious journey, in which forty-five portages were necessary. Remained here procuring information and taking the census. Left on 11th July for Matawagaminque Post, in what is known as the Kenogamissce district, and situated forty or forty-five miles south-east of Flying Post in a straight line, but twice that distance by canoe route. In this stretch, twenty-two portages had to be made. Arrived at Fort Mattagami, or Matawagaminque, on 15th July. Remained two days taking census and obtaining such general information as I could in regard to the resources of that part of the territory. Left Matawagaminque Post on the 18th of July, and following the Mattagami River northward to its junction with the Moose River, and the united rivers thereafter; arrived at Moose Factory on the 29th of July. The distance between the two Posts, by the river, is estimated at 275 miles, and number of portages about twenty. Left Moose Factory on the 4th of August for Albany Factory, which was reached on the 10th; distance along the coast, ninety-six miles. Stayed five days, getting such information as I could of value or interest in reference to the country, and superintending the taking of the census there.

On the 15th of August, having obtained guides and some additional supplies, I commenced the ascent of the Albany river, which, under the Award, was the north-west boundary of our Province. The first stretch was to Marten's Falls, distant by my

reckoning about 212 miles from Albany Factory. This was reached after a very hard and toilsome journey on the 28th of August. Two days sufficed to take the census and obtain all the information Mr. Taylor (who had only been a short time at the Post) could give me. I was detained, however, several days longer before guides could be obtained. On the 2nd of September, however, I started, the next objective point being Osnaburgh Post, situated at the northern extremity of Lake St. Joseph, and estimated to be about 212 miles distant from Martin's Falls. This Post was reached on the 13th of September, our progress throughout having been rendered very laborious and difficult owing to the extreme lowness of the water this season. Twenty-seven portages, too, had to be made in this stretch. Two other days were spent at this Post. When having completed the census, and procured fresh guides, I was ready to proceed. Leaving Osnaburgh on the 16th of September we directed our course south-west for Lac Seul or Lonely Lake, and arrived at the Hudson Bay Company's Post there on the 22nd of September. The distance is called 100 miles, with nine portages on the part of the route between the lakes; but owing to our guide's incompetence we were led many miles out of our way. From Lac Seul I was nearly obliged to return by Rat Portage, owing to my inability to obtain a guide who knew the route to Wabigoon. Finally, however, I took the best I could get, and leaving Lac Seul on the 23rd of September struck the line of the Canadian Pacific Railway near Wabagoon, 206 miles from Fort William, Thunder Bay, on the 29th of September. The route from Lac Seul followed by us could not have been less than twenty-five miles in length, and in this stretch nine more portages had to be made.

Left Wabigoon on the 1st of October by construction train, and arrived at Prince Arthur's Landing next day. Was detained here and Sault Ste. Marie several days waiting for steamers and paying off *voyageurs*, etc., and finally got back about the 10th of October.

Including the time occupied in preliminary arrangements, I was again engaged nearly five months, a period which embraces the whole season available for navigation in the territory in question. The distance travelled this season, in connection with my duties, is roughly estimated at 3,065 miles, of which 1,275 miles were by canoe.

One hundred and forty-three portages, the longest of which was about three miles, were made.

The notes taken by me during this season's explorations, in regard to topography, geology, soil, minerals, timber, animals, fish and birds, etc., with the narrative of our daily progress, cover over 500 pages $7\frac{1}{4}$ x $4\frac{3}{4}$ inches.

During the winter I prepared and supervised the printing of my report.

E. B. BORRON,
Stipendiary Magistrate.

RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING, IN THE YEAR 1882; AND SHEWING, ALSO, THE OTHER DUTIES PERFORMED BY HIM.

No cases before me this year.

OTHER DUTIES PERFORMED.

Having received permission to visit Moose Factory, on taking a route which might enable me to procure additional information in reference to the country drained by the Ahkukootish, or Groundhog River, on which "Flying Post," of which favourable mention had been made in last year's report, p. 27, is situated, I made such preparation as I could in Toronto, and embarked on the steamer *Manitoulin*, at Collingwood, on the 17th of May. My intention was to proceed to the mouth of Mississagua River, and,

ascending that river to the Height of Land, strike if possible the head waters of the Groundhog.

Unfortunately the steamer took fire, and all my camp equipage and outfit burnt, with the exception of a portion of my provisions, which had been forwarded by another boat, and the money I had with me. This unforseen occurrence occasioned considerable delay, but was repaired as quickly as possible, and on the 22nd of June I commenced the ascent of the Mississagua River. I succeeded, as anticipated, in crossing the Height of Land, struck the source of the Groundhog (Lake Wakamagaming),and descended that river and the Mattagami River (which it joins) to Moose Factory, which was reached on the 28th of July.

The distance, roughly estimated, from Lake Huron to James' Bay by this route is about 450 miles, and upwards of sixty portages, varying in length from a few chains only to three and a-half miles, had to be crossed.

Finding that there was nothing requiring my interference or presence in my judicial capacity, I only made a short stay; for if the season continued dry, as it seemed likely to do, and the water in the small creeks and brooks on the Height of Land fell too low, we might have had a very great deal of trouble in getting back by the routes we wished to follow.

On the 1st of August, therefore, I again set out on my return. Ascending the main Moose River to where the Mattagami branch joins it, we continued our voyage up it until we arrived at Mattawagamingue Post, also mentioned in the report of last year. From thence, with the help of another guide, we ascended to the head waters of the Mattagami River, on the Height of Land; thence, having procured another Indian guide, a route, very rarely travelled by white men was followed across the Height of Land, which soon brought us into a fine lake called Monabing, the source of one of the principal branches of Spanish River. The river which issues from this lake was followed to Vermillion Lake, and thence by the Vermillion River, or branch of Spanish River, to where the route diverges to the Hudson Bay Company's Post on Whitefish Lake. From this Post we followed the route to White Fish River to Lake Huron.

From Moose Factory to the watershed on the Height of Land is estimated at about 310 miles, and from the Height of Land to the mouth of White Fish River, about 136 miles. The total distance from James' Bay (Moose Factory) to Lake Huron by this route is thus estimated at 446 miles, and number of portages 69.

Thereafter I proceeded, in succession, to La Cloche Manitowaning and the Fur-trading Posts at the mouth of the Mississagua River, to settle accounts for supplies and pay off my guides and *voyageurs*. It was thus about the middle of September when I got back to Toronto.

In my report will be found the results of my explorations and observations. One of the principal objects of this season's work was to add somewhat to our knowledge of the timber resources of our Province, more particularly of the region producing, or adapted to the growth of, the valuable red and white pine. My explorations convince me that, between the Oba River on the west, and the Provincial Boundary on the east, very little red or white pine grows north of the forty-ninth parallel of latitude; but that between that parallel and the Height of Land, and on the Height of Land itself, there are large and valuable areas of pine; and that on the routes followed by me, pine is the prevailing timber wherever it has not been cut off by the lumbermen, or destroyed by fire, on the southern slope from the Height of Land to the lake shore.

Time occupied, four months; distance travelled from the date I left Toronto until I returned, about 2,085 miles; of which 1,175 miles were by canoe, and the remainder by steam; in all, 132 portages were made, varying in length from a few chains to three and a-half miles. Wrote Report, etc., in Toronto.

E. B. BORRON,
Stipendiary Magistrate.

RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING, IN THE YEAR 1883; AND SHEWING, ALSO, THE OTHER DUTIES PERFORMED BY HIM.

No cases brought before me this year.

OTHER DUTIES PERFORMED.

My explorations in this territory, having hitherto been chiefly confined to the part lying to the east of Missinaibe River, I concluded, with the approval of the Government, that in going to Moose Factory this year, I would pursue the following route, which would take me for the most part over, or through, territory lying to the west of the Missinaibe. This was to proceed to Red Rock, Lake Superior, and ascend the Nipigon River to Lake Nipigon, thence strike eastward to Long Lake; from Long Lake to descend the English, or more properly Kenogami, River to its junction with the Albany River; and thence down that river to Albany Factory; from Albany Factory to Moose Factory along the coast of James' Bay.

Leaving Toronto about the 20th of May and Sault Ste. Marie on the 30th of May, I followed the route above indicated as far as Long Lake House, which was reached on the 28th of June. Here we had expected to have found a fresh supply of provisions, which were to have been sent inland by the Hudson Bay Company's officer at Pic River, Lake Superior. Disappointed in this, we had to go to Pic to get them. Returning thence, it was on the 18th of July before we got started again. On the 24th the Hudson Bay Company's Post at Mamattawa was reached. Here we remained a few days, which were devoted to an examination of the adjacent country. On the 31st July we again resumed our journey, and entered the Albany River about three o'clock in the afternoon next day. Albany Factory was reached on the 6th of August. Fresh supplies and a guide were obtained, and a start made for Moose Factory on the 8th of August. We were storm-stayed two days, but arrived there on the 13th of August.

On page 43 of my Report for this year, the following entry will be found: "August 14th. I was glad to find there was no criminal business to detain me at Moose. I hope that before anything serious of that nature has to be dealt with, the award of the arbitrators may have been confirmed, and a lock-up built here. A constable, too, would needs be appointed and paid by the Provincial Government. Conscious of the difficulties of the position and of the disadvantage at which we are placed, *I have abstained, as far as possible, from weakening the hands of the Hudson Bay Company's officers by any interference in little misunderstandings between them and their servants, leaving such to be settled in the way that they have always been.*"

I had come now rather to *strengthen their hands;* for, at my suggestion, the Honourable Attorney-General had seen fit to recommend that James L. Colter, Esq., of Moose Factory, and W. K. Broughton, Esq., of Albany Factory, chief officers in the Department, should be appointed Justices of the Peace. I had brought the commissions with me, and administrated to them the usual oaths.

We left Moose Factory on the 16th of August, and calling at New Brunswick House and Missinaibe Post on the 11th of September, arrived at the Hudson Bay Company's Post at the mouth of Michipicoten River.

The shallowness of the water this season, especially in the Missinaibe River, rendered this part of our voyage very slow and laborious, as only those who have made this trip in the dry months of an exceptionally dry season can form any idea of the loss of time thus occasioned, and also, from the necessity we had been under of going from Long Lake to Pic for provisions, prevented my fully carrying out my intention, which was to have explored, at least partially, the country lying between Brunswick and Long Lake.

Left Michipicoten on the 15th of September, and after a few days spent at Sault Ste. Marie, settling with *voyageurs*, etc., got back to Manitowaning almost exactly four months from the date on which I had started from Toronto.

In the performance of my duties this season, it was necessary to travel, in all, not less than 2,465 miles; of which, as will be seen on page 60 of report for this year, 1,265 miles were by canoe, with 104 portages.

My report was, as usual, prepared and printed during the winter, and to it I must refer for the particulars of the work done.

As observed before, I have obtained a great deal of information in reference to the territory, which could not properly be introduced into my reports, but which will, I believe, nevertheless, prove valuable whenever the settlement of the Boundary Question will justify or permit the taking of steps to open up and develop the resources of the territory. My notes this season cover not less than 400 pages.

E. B. BORRON,
Stipendiary Magistrate.

RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING; AND ALSO SHEWING OTHER DUTIES PERFORMED BY HIM IN THE YEAR 1884.

No cases brought before me this year.

OTHER DUTIES PERFORMED.

In last year's report (fifth), pp. 66, 67 and 68, under the head "Opening up the Country," it will be seen that I had formed a very favourable opinion in regard to the route from Lake Superior to James' Bay, *via* Long Lake and the Kenogami or English River.

In the full belief that the completion or improvement of this route would be of the greatest importance in the event of the title to the territory claimed by our Province being confirmed, I proposed, with the approval of the Government, to examine it more carefully this year than I had been able to do on my trip to Moose Factory last season.

I started on this exploration from Collingwood on the 23rd of May, having previously purchased and sent on most of the supplies I thought would be needed. My destination was again Michipicoten River, which I purposed ascending to the Height of Land; crossing which I expected to be able to reach Oba Lake, the source of the Oba River, which I had reason to believe would take me to Mamattawa, the Hudson Bay Company's Post, on English or Kenogami River, and the most favourable point for carrying out the object I had in view. Owing to the enormous press of work going on in connection with the construction of the C. P. R., and confusion at Michipicoten, I experienced great delay in getting forward my supplies and procuring canoes, and especially in obtaining guides. The route down the Oba is rarely travelled—only by Indians, and few of these. It led us, as I had expected, to Mamattawan, by a somewhat shorter route than that by Pic River and Long Lake, but one which, in the absence of my guide who had previously passed over it, rendered our progress very slow. The consequence was I did not succeed in getting to Mamattawan until the spring flood was almost over, and the water really lower than when I had passed down the year before. As will be seen in my report, therefore (6th), my somewhat sanguine expectations in regard of the navigability of the Upper Kenogami were not fully borne out. Although quite practicable for a short period in the spring, and calculated to be of great importance in the absence of railway or other more reliable communication, the construction of a road to connect this navigable stretch with that of Long Lake did commend itself as being immediately or pressingly required at present.

I was obliged to terminate my explorations earlier than usual, owing to the low condition of the water of the rivers, and the anxiety of my *voyageurs* to return home to their families, those from Michipicoten especially, all sorts of rumours having reached them in regard to riots and disturbances there.

Although shorter than usual, I think the general results of my explorations, and the value of the information contained in my report (to which I most respectfully refer for particulars), amply justify the labour and expense of even this season's explorations.

Travelled in connection with exploration, etc., this season, about 1,480 miles; of which 580 miles were by canoe, in the course of which 85 portages, from a few chains to six miles in length, were necessary.

E. B. BORRON.

RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING; AND SHEWING, ALSO, THE OTHER DUTIES PERFORMED BY HIM IN THE YEAR 1885.

No cases brought before me this year.

OTHER DUTIES PERFORMED.

While the decision of the Privy Council last year gave to Ontario all that was claimed on her behalf to the south and west, the setting aside of the award of the arbitrators, and refusal (as I understand it) of the Dominion Government to refer the question of the Provincial Boundary on the north to that tribunal, left matters, if anything, in a worse condition than before. In view of which, and the fact that Justices of the Peace had been appointed at Moose Factory and Albany Factory, I did not think that it was necessary to go *there*.

The Canadian Pacific Railway being almost completed, it seemed to me that the southern part of the territory, having been thus rendered much more accessible than the northern part, would naturally be the first to attract settlers, and should be the first to be developed. The engineer (Mr. Gainsby) engaged in the explorations required in connection with the location of the line of the C. P. R., had reported that there was a large tract of land, seventy per cent. of which possessed a very good soil, lying to the eastward of the Missinaibe River, and not more than forty or fifty miles north of the line ultimately selected.

Other reports, obtained from Indian sources, went to show that there was a considerable extent of good land in the vicinity of Lake Opazatika, also on the east side of Missinaibe River, and north of the most northerly exploratory line of the C. P. R.

It appeared to me, therefore, that it would be exceedingly desirable to have further information in respect to this particular section of the country, and the Government having approved of my suggestion, I concluded to visit and examine it.

For the details of the work done, and the opinions I have formed in regard to this section of the country, I must refer to my report.

The facilities afforded by the Canadian Pacific Railway, of which I was able to take advantage, and the necessity for more frequent and longer excursions inland on foot, greatly lessened the distance travelled by canoe this year. The period, also, during which I was able to remain out, was also again shortened owing to the impossibility almost of obtaining or keeping Indian guides, and the low state of the water in the smaller rivers, which frequently renders them quite unnavigable in August and September. Before this time all the Indians whose hunting grounds are any distance from the Hudson Bay Com-

pany's Posts have got their supplies (called "outfits"), and gone off to their hunting grounds in their canoes; I was only out, therefore, about three months.

Distance travelled by rail (about)	1,600 miles.
" voyaged by canoe (about)	590 "
Total distance	2,190 "

E. B. BORRON.

RETURN SHEWING THE NUMBER OF CASES BROUGHT BEFORE E. B. BORRON, STIPENDIARY MAGISTRATE FOR NORTHERN NIPISSING; AND ALSO SHEWING THE OTHER DUTIES PERFORMED BY HIM IN THE YEAR 1886.

No cases brought before me this year.

OTHER DUTIES PERFORMED.

For the same reasons as given in last Return, I was anxious last spring to employ myself during the season, when the condition of the water in the rivers was most favourable, in a further exploration of the country lying to the west of the Missinaibe River from the C. P. R. on the south, to the junction of the Albany branch and Missinaibe River on the north.

In order to this, I instructed one of the *voyageurs*, who usually accompanies me and acts also as interpreter, to proceed from Sault Ste. Marie, by steamer, to Jack Fish Bay, Lake Superior, taking with him a canoe and a portion of the necessary supplies, and meeting me at Lochalsh Station on Dog Lake. I myself left Collingwood on the 29th of May, on the Northern Railway, for Toronto, from whence I travelled by the C. P. R. On my arrival at "Missinaibe," some six miles from Lochalsh, I found my man there—this having been made the principal station on Dog Lake. From thence I proceeded to the Hudson Bay Company's Post on Lake Missinaibe, some forty miles distance, to procure guides. As usual, this occasioned some delay, aggravated by the fact that my supplies sent from Toronto, and duly addressed and forwarded by C. P. R. to Lochalsh, had been carried past Lochalsh and taken to Port Arthur, some 300 miles further on, and had to be brought back.

On the 15th of June, however, having got these supplies and procured guides, I was enabled to set out from Dog Lake. The route which I had marked out for myself, as that calculated to afford me most information in reference to the soil, timber, minerals, or other resources of the district referred to, was as follows: From the north-west end of Mattagaming (sometimes called Dog Lake) to Lake Wabatongushene; thence Lake Oba; thence down the river Oba to the forks, or point, where I had been told (in 1884) the river divided into two streams, one of which flowed into the Albany River and the other into the Missinaibe branch of Moose River. Pursuing this latter, my intention was to follow it until I came to the junction; thence to ascend the Missinaibe River, to where it is joined by the Brunswick River; thence up this river to Brunswick Lake; thence across the portages at the south-east end, back to the Missinaibe River, and up this to Missinaibe Station, the place of beginning. I made this circuit, ascending every tributary that entered on the route so far as they were navigable, in a light and medium sized (three fathom) canoe, making short excursions inland on foot at many points.

This section is, as the Indians told me last year, the least swampy, and has a larger portion of land fit for pastoral, if not agricultural purposes, than in any other part of the territory at all accessible or likely to become so for many years. The experience obtained at Brunswick House, which is centrally placed in respect of the territory explored during

the last two seasons, is conclusive as to the suitableness of the climate to the growth of not only timothy, clover and other grasses, but all the common roots and cereals, even wheat.

On both sides of the Missinaibe River there are good tracts of land which can be developed or opened up, at an inconsiderable cost, for roads, and will attract settlers at no distant date.

I was again obliged to return early, in consequence of all the smaller rivers so far drying up as to be no longer navigable, and the anxiety of my guides to get away. Last year, 1885, and this year, 1886, the only Hudson Bay Company's Post visited in this territory has been Missinaibe House. Brunswick House, or New Brunswick, visited also this season, has been (temporarily at least) abandoned by the Hudson Bay Company. The season devoted to explorations has been shorter this year than any other, but the results are, I think, more valuable than some of those protracted over double the period. I arrived back in Collingwood on the 6th of August.

Total distance travelled, about 1,800, of which about 1,230 were by railway and steamer, and about 566 by canoe; in the course of which upwards of fifty portages, varying from a few chains to two and a-half miles, were necessary, and many miles traversed on foot.

E. B. BORRON,
Stipendiary Magistrate.

(No. 65).

Detailed Statement of all Bonds and Securities recorded in the Provincial Secretary's office, since the last return submitted to the Legislative Assembly, made in accordance with the provisions of the Statute. (*Not printed*).

(No. 66).

Statement of the Assets, Liabilities, Revenue, etc., of the municipalities within the several Counties in the Province for the year 1885. (*Not printed*).

(No. 67).

Return shewing the number of votes polled by widows and unmarried women in the municipalities of the Province at the late municipal elections. (*Not printed*).

SEVENTEENTH ANNUAL REPORT

OF THE

ENTOMOLOGICAL SOCIETY

OF

ONTARIO.

Printed by Order of the Legislative Assembly.

Toronto:
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1887.

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SEVENTEENTH ANNUAL REPORT

OF THE

ENTOMOLOGICAL SOCIETY.

To the Honourable the Commissioner of Agriculture:

SIR,—I have the honour to submit herewith for your consideration the Seventeenth Annual Report of the Entomological Society of Ontario, prepared in accordance with the provisions of our Act of Incorporation.

The Society held its annual meeting in the City of London on Wednesday, October 10th, 1886, when the officers for the ensuing year were elected, and the ordinary business of the Society transacted.

I also submit herewith the minutes of the annual meeting and the audited annual financial statement of the Society.

The publication of the *Canadian Entomologist*, now in its nineteenth year, is regularly maintained.

I have the honour to be, Sir,

Your obedient servant,

EDMUND BAYNES REED,
Secretary-Treasurer.

ANNUAL MEETING OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO.

The annual meeting of the Society was held pursuant to notice in the Society's rooms, London, Ontario, on Wednesday, October 20th, 1886, at 8 o'clock.

The Vice-President, Rev. C. J. S. Bethune, M.A., D.C.L., of Port Hope, in the chair.

Present: Mr. James Fletcher, Ottawa; Mr. J. Alston Moffatt, Hamilton; Rev. Thos. W. Fyles, South Quebec; Mr. A. W. Hanham, Hamilton; Capt. Gamble Geddes, Toronto; Dr. J. R. White, Toronto; Mr. J. M. Denton, Mr. J. Bowman, Dr. Burgess, Dr. Arnott, Dr. Woolverton, Mr. H. P. Bock, Mr. Laurence Reed, Mr. Werner, Dr. Wishart, Dr. Mitchell, of London, and the Secretary-Treasurer, Mr. E. Baynes Reed.

The minutes of the previous meeting having been printed and circulated among the members, their reading was dispensed with, and they were duly confirmed.

The Secretary read a letter from the President, Professor Saunders, regretting his inability to be present at the meeting, and stating that he would be unable to continue in active participation in the work of the Society, or to act as Editor of the *Canadian Entomologist*, inasmuch as he had accepted the Government appointment of Director of the Experimental Farm Stations, and consequently the whole of his time would necessarily be fully occupied.

The report of the Council, the audited financial statement of the Secretary-Treasurer, the report of the Librarian, the report of the Delegate to the Royal Society of Canada, and the report of the Delegates to the American Association for the Advancement of Science, were laid before the meeting, and on motion duly received, discussed and adopted.

The report of the Montreal Branch was read by the Secretary and ordered to be printed in the Annual Report.

REPORT OF THE COUNCIL FOR 1886.

The Council are able to report progress in the work which has been so long and successfully carried on by the Society.

The *Canadian Entomologist* has been issued as usual, and the high character of its articles fully maintained.

As stated at the last annual meeting the Society, in compliance with the request of the Dominion Government and with the cordial approval of the Provincial Government, prepared and sent to England their whole collection of Canadian insects, to form part of the Indian and Colonial Exhibition.

The collection contained some ten thousand insects representing the various orders.

They reached their destination in safety and have been well taken care of.

The Council desire to express their thanks to those members of the Society who gave so much time and assistance in preparing and arranging the collection, especially mentioning Mr. J. Alston Moffat, of Hamilton, Mr. W. H. Harrington, of Ottawa, and Mr. F. B. Caulfield, of Montreal.

A number of electrotypes of insects not hitherto figured have been procured for the illustration of the annual reports, These have been drawn and engraved from specimens in the Society's collection.

During the spring of this year a Farmers' Institute was organized in the County of Middlesex, and the Council thought it proper that the Society should be represented thereat, and accordingly Messrs. Denton and Reed attended the meeting and gave information on entomological matters of interest.

It is with deep regret that your Council has to announce that their esteemed President and Editor is compelled to withdraw from active participation in the work of the Society, owing to his having accepted the onerous duties of the Director of the Experimental Farm Stations.

The Council, while congratulating Professor Saunders upon this recognition of his abilities and zeal in the public service, would desire that the Society should place on record their appreciation of the valuable services which, for a period now extending over a quarter of a century, he has rendered to the cause of scientific and economic entomology, and they would suggest the propriety of making Professor Saunders a life member of the Society.

The Council further suggest that all ex-presidents be members *ex-officio* of the Council of the Entomological Society.

The report of the Montreal Branch will be submitted in due course.

The Society was duly represented at the meeting of the American Association for the Advancement of Science at Buffalo, and a report of the delegation will be presented.

The report of the Secretary-Treasurer is submitted herewith.

Presented on behalf of the Council,

E. BAYNES REED,
Secretary-Treasurer.

London, Ont.,
October 20th, 1886.

ANNUAL STATEMENT OF THE SECRETARY-TREASURER OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO FOR THE YEAR ENDING OCTOBER 18th, 1886.

Receipts.

Balance from previous year	$ 265 35
Members' fees, sale of *Entomologist*, etc	199 37
Provincial grant, 1886	1,000 00
Collectors' material—pins, cork, etc	44 13
Interest on Savings' Bank account	7 28
Dominion grant for Colonial and Indian Exhibition	300 00
	$1,816 13

Disbursements.

Canadian Entomologist, printing, paper, stationery, etc	$423 12
Library account	250 61
Expenses of report for 1885, including engraving, electrotyping and wood-cuts	189 35
Annual vote to Editor and Secretary	175 00
Rent	80 00
Caretaker	10 00
Collectors' material—pins, cork, etc	115 20
Insurance	41 25
Expenses preparing collection for Colonial and Indian Exhibition, Insurance, etc	353 00
Sundries, postage, telegrams, fuel, etc	41 33
Expenses of delegation to A. A. A. S., Buffalo	36 70
Balance	100 57
	$1,816 13

We certify that we have examined the above account with books and vouchers, and found the same to be correct. Balance in hand and in bank, one hundred dollars and fifty-seven cents.

H. P. BOCK,
W. E. SAUNDERS, } Auditors.

London, Ont., Oct. 18th, 1886.

REPORT OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO TO THE ROYAL SOCIETY OF CANADA.

As delegate from the Entomological Society of Ontario, I have much pleasure in announcing that the Society which I have the honour to represent, continues its labours with undiminished energy and success. Its membership is large, and it is everywhere recognized as one of the most important scientific institutions of the country.

Its monthly publication, the *Entomologist*, continues to receive the support of, and to be welcomed by Entomologists of all places, and Vol. XVII. for 1885 is a most valuable addition to the recorded knowledge of American insects. The contributors to this volume, forty in number, include the leading Canadian workers, and many of the best known entomologists of the United States. A complete set of the *Entomologist* and of the Annual Reports will be found to contain a vast store of information in regard to the structure, classification, distribution and habits of our insect foes and friends.

The title "Entomological Society of Ontario," might lead many to suppose that its work was limited to this Province, but in reality it is carried on by members in all parts of the Dominion, from Prince Edward Island to British Columbia. The fauna of the latter province, and of the North-West Territories, has been investigated during recent years by several experienced collectors, and large additions have been made to Canadian lists, and many new species discovered in the several orders of insects.

Through the contributions of members, the collection maintained by the Society has rapidly increased in size and value. By special request of the Dominion Government this collection has been sent to the Colonial Exhibition just opened in London. It was first carefully re-arranged by members having special knowledge of the various orders, and was much improved by having a large proportion of the old specimens replaced by fresh material, and by having a large amount of new material incorporated. The collection, as thus arranged and enlarged, fills over one hundred large cases, and will undoubtedly favourably impress all beholders with the great number and variety of our insects.

The Society has learned with pleasure that a competent Entomologist is proposed to be employed in connection with the Experimental Farm to be started for the investigation of scientific agriculture. Such an officer is a decided essential, and his duties will be, to quote from Prof. Saunders' Report to the Department of Agriculture, "to investigate the habits of insects destructive to farm and garden crops, fruit, etc., as well as those affecting animals, with a view of testing such remedies as may be available for their destruction. He should also prepare such collections for the museum at the Central Station as would illustrate the insects injurious and beneficial to vegetation, and duplicate collections of a similar character as early as practicable for each of the sub-stations."

In this connection it may be stated that Mr. Fletcher, who is at present acting as Honorary Entomologist to the Department of Agriculture, has, under exceptionally unfavourable conditions, and without being able to devote his time to the work, or to employ needed assistance, published a Report containing a large amount of information about the insects which were found to be most injurious during the past year. The Report is based upon his personal observations in different sections and upon voluminous correspondence from all parts of the Dominion. It is an earnest of what might be accomplished by an Entomologist having the necessary equipment and assistance to prosecute and record investigations.

Fortunately neither from Mr. Fletchers' Report, nor from that of the Entomological Society, do we find that any especially destructive new pests were met with during the past year. Nor were some of the old ones so abundant and devastating as formerly. The ravages of the Larch saw-fly (*Nematus Erichsonii*), and of the Spruce bud-moth (*Tortrix fumiferana*) shows signs of decrease. The Clover-seed midge (*Cecidomyia leguminicola*), continued to do serious injury over extended areas, but if farmers will act upon the suggestions which have been made in our reports regarding the cultivation of this crop, they can harvest a good yield of seed.

Two of the most destructive insects in Canada for many years past have been the Codling-moth (*Carpocapsa pomonella*), and the Plum-curculio (*Conotrachelus nenuphar*), the former destroying or injuring probably one-fifth of our apple crops, and the latter, often causing a total failure of the crop of plums. Numerous remedies have been proposed and employed against these pests, but the labour required was in each instance considerable, and the results were scarcely ever entirely satisfactory. Experiments made during recent years by our members have, however, proved that Paris Green is an efficient and practicable remedy, when mixed with water and sprayed upon the trees as soon as the flowers have been fully fertilized.

These facts are mentioned by me in order that a knowledge of them may be distributed by the Fellows of your Honourable Society and by the Delegates attending this meeting.

The loss to the country occasioned by the ravages of insects upon crops of all kinds, is so enormous that it becomes the duty of every Society interested in Natural History or the Economic Sciences to do what may be in its power to enable agriculturists to combat their small but numerous foes, and thus add to the prosperity of the country.

W. HAGUE HARRINGTON,
Delegate.

May, 1886.

MONTREAL BRANCH—ENTOMOLOGICAL SOCIETY OF ONTARIO.

The thirteenth annual meeting of this Branch was held at the residence of the President, G. J. Bowles, Esq., on Tuesday, May 25th, 1886, at 8 o'clock p.m.

The President read the following report of the Council for the year :—

The Council beg to submit the Thirteenth Annual Report of the Branch.

Seven meetings have been held during the year, at which the following papers have been read :—

1. Insects of Canada and Norway.—G. J. Bowles.
2. On *Physonota unipuncta*, Say, and its supposed varieties. —F. B. Caulfield.
3. *Euchœtes egle* and its white variety.—G. J. Bowles.
4. On the hybernation of *Formica herculeana*.—G. J. Bowles.
5. Notes on some species of *Silphidæ* occurring in the vicinity of Montreal.—F. B. Caulfield.
6. The *Catocalas*.—G. J. Bowles.
7. Notes for 1885 on injurious and other insects.—J. G. Jack.
8. Notes on *Ceresa bubalus*, the Buffalo Tree-hopper.—J. G. Jack.
9. Notes on the *Zygœnidæ*.—G. J. Bowles.
10. On some collecting grounds in the neighbourhood of Montreal.—F. B. Caulfield.
11. List of *Orthoptera* taken in the vicinity of Montreal.—F. B. Caulfield.

Of these papers, Nos. 1, 3, 4, 6 and 7 have been published in the *Canadian Entomologist*, and No. 5 in the Society's Annual Report for 1885.

Your Council have much pleasure in stating that the meetings have been well sustained, and that a number of species have been added to our local list.

The *Hemiptera* have been taken up by Mr. Bowles, and a number of species identified, and the *Orthoptera*, through Mr. Caulfield's exertions, have been increased from six species to thirty.

The number of species added to the Montreal lists during the year is as follows :—

Lepidoptera	81
Coleoptera	142
Hymenoptera	5
Orthoptera	24
Diptera	15
Neuroptera	10
Hemiptera	15
Total	292

Which, added to the list of last year, makes the total number on the Montreal list 1,395, divided as follows :—

Lepidoptera	565
Coleoptera	581
Hymenoptera	104
Orthoptera	30
Diptera	74
Neuroptera	22
Hemiptera	19
Total species	1,395

While congratulating the Society upon the work accomplished during the year, your Council would remind the members that much still remains to be done, even in the favourite orders *Lepidoptera* and *Coleoptera*. In the former, the *Micros* have been almost entirely neglected, and special attention should be given to these and to the early stages of all the families. In *Coleoptera* the number of *Dytiscidæ* and the smaller *Carabidæ* might,

with a little work, be largely increased, and the food habits of our wood-boring beetles would well repay investigation. In the remaining orders a beginning only has been made, and there is a vast and almost unworked field before us.

Your Council would therefore urge upon the members the necessity of continued zeal and energy in carrying out the pleasant task of working up the insect fauna of our district.

The whole respectfully submitted,

GEORGE JOHN BOWLES,
President.

The report having been adopted, the election of officers took place, with the following result :—

G. J. Bowles, President ; H. H. Lyman, Vice-President ; F. B. Caulfield, Secretary-Treasurer ; J. G. Jack, W. H. Smith, W. D. Shaw, J. F. Hausen, Council.

The President read a paper on the "Cotton moth" (*Aletia argillacea*), giving its history up to date, with a record of its occurrence north of the cotton belt.

Mr. Lyman showed some rare *Lepidoptera* taken at Hudson's Bay by Dr. Robert Bell.

The President showed a number of Canadian *Lepidoptera* and *Coleoptera*, after which the meeting adjourned.

F. B. CAULFIELD,
Secretary.

In the absence of the President, his Annual Address was read by the Secretary.

ANNUAL ADDRESS OF THE PRESIDENT OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO.

Gentlemen,—It is seldom that a season passes in Canada with so little to record in in reference to the injuries caused by destructive insects. Not only have we been favoured by a kind Providence with a bountiful harvest, but our farmers have in great measure been free from the losses which usually occur from insect pests.

The Colorado potato beetle, *Doryphora decemlineata*, has proved destructive to potato vines in a few localities, and where the application of the usual remedies has been neglected or too long delayed, they have destroyed the foliage to such an extent as to injure the crop ; but where the use of Paris green has been promptly resorted to no difficulty has been experienced in keeping this pernicious insect within due limits.

The Plum Curculio, *Conotrachelus nenuphar*, has been far less prevalent than usual, so that in many instances good crops of plums have been secured, even where no efforts have been made to keep the insect in subjection. The plum crop generally has been a good one and plum culture has consequently received a considerable impetus.

The worm of the Cabbage butterfly, *Pieris rapæ*, although still plentiful, is no longer the terror to cabbage growers it formerly was, its natural enemies having multiplied to a degree sufficient to keep it within some reasonable degree of subjection. The general immunity which has of late prevailed regarding the pea-weevil, *Bruchus pisi*, still continues and pea culture has become more general. Even the codling-worm, that perennial plague to the apple grower, has been less injurious than usual, so that our apple and pear crops have been freer than common from this obnoxious insect. Indeed there seems to have been a general scarcity of insect life during the past season, of which collectors in this department of natural history in Canada generally complain.

Our large and important crops of cereals have been almost entirely free from insect pests, but this experience has not by any means been universal. In the mother country much consternation has been caused of late by the sudden appearance of the Hessian fly in the wheat fields in considerable force, so that very serious injury has occurred in many quarters. When first noticed specimens of the infested grain were submitted to Miss Eleanor A. Ormerod, Consulting Entomologist to the Royal Agricultural Society, who at once divined the cause, found the linseed-like chrysalis in the wheatstalks and promptly

suggested the usual remedies for this trouble; advice which, if persistently followed will, no doubt, soon reduce the numbers of the insects to about their normal proportion. Mr. Whitehead also has been actively engaged in investigating this important subject and in disseminating information among farmers.

Having been absent in Europe during the spring and early summer months, I have been unable to give the usual attention to Entomological subjects. While in England I had the privilege of seeing several fine collections of insects, but none gave me more pleasure in inspecting than that of the immortal Linnæus, the results of whose painstaking work is carefully preserved in the library of the Linnæan Society. Through the kindness of Dr. James Murie, the librarian, I was permitted to inspect this interesting cabinet, where every specimen bears evidence of having been mounted and named by this great master in natural history. One could not help dwelling in thought on the marvellous progress which has attended the study of natural science, since the master mind of this wonderful genius was brought to bear on the simplification of its nomenclature.

Every facility was also afforded me for examining the marvellously complete collections of insects in the natural history department of the British Museum in Kensington, under the kind guidance of Messrs. Butler and Kirby. Both these gentlemen did all in their power to make my visits to that institution both pleasant and profitable, and showed me many kindnesses which will never be forgotten. The collections of butterflies here are especially wonderful in their completeness. Take for instance the species composing the genera *Pieris* and *Colias*, and beginning with the plain ground colour of white or yellow, one can trace the black bordering of the wings through all the different gradations from the faintest marginal outline to the heaviest and widest bands, and the transition is so gradual that it is extremely difficult to say where one species ends and another begins.

While passing through the extensive grape-growing regions in the south of France, a sharp eye was kept on the vineyards with the view of detecting evidences of *Phylloxera*. I am pleased to report that I saw but few indications of its presence, and from enquiries made, the conclusion was reached that this insect pest which, a short time ago, was so exceedingly destructive to the vine-growing interests, is now doing comparatively little harm. It was the occasion of much regret that the limited time at my disposal would not permit me to visit any of the noted collections of insects to be found in most of the large cities in Europe.

While in London an opportunity was afforded me, which I gladly availed myself of, that of visiting the South Kensington Museum, in company with Miss Ormerod, and of inspecting the work of that talented lady as displayed in the cases of insects mounted, and the preparations made by her to illustrate the life history of injurious insects and depict their ravages, forming a most interesting and complete series of object lessons in this important economic department of entomological science. I was also present at one of the monthly meetings of the Entomological Society of London, where I had the good fortune to meet many entomologists of note, including the venerable Professor Westwood, H. T. Stainton, Esq., Mr. McLachlan, and others. All treated the stranger with the greatest possible courtesy and kindness, and at the same time manifested the warmest interest in everything relating to the progress of entomology in Canada.

During the past year there have appeared several important works on economic entomology, prominent among which may be mentioned the reports from the Entomological Bureau of the Department of Agriculture at Washington, under the direction of Professor C. V. Riley, and the report of Professor J. A. Lintner, State Entomologist of New York. In both these publications are recorded a number of useful observations and many new facts relating to the life history and habits of the species treated of. Among other important works on entomology may be mentioned the continuance of that magnificent work on the "Butterflies of North America," by W. H. Edwards, and a volume on the "Butterflies of the Eastern States," by G. H. French, of Carbondale, Illinois.

At the recent meeting of the Entomological Club of the American Association for the Advancement of Science, held in Buffalo, N.Y., our Society was represented by the President, Vice-President, Secretary, and Mr. J. Alston Moffat. Our Society was honoured in the election of our Secretary, Mr. E. Baynes Reed, to be Secretary of the Club. The local members did all in their power to make the gathering a pleasant one, and in addition to

the ordinary meetings, special entomological excursions took place which were much enjoyed by all. The collections of the several members residing in Buffalo, and the fine library belonging to the Society of Natural Sciences, were freely opened to the visiting members.

The entomological collections in the American National Museum at Washington are being rapidly augmented under the energetic direction of the Curator, Mr. John B. Smith. The valuable private collections which have been acquired, added to the large amount of material constantly accumulating and being rapidly arranged, have already made it a most valuable collection of reference.

In accordance with a request made by the Minister of Agriculture for the Dominion, the valuable collection of our Society was specially prepared for exhibition during last winter, and forwarded early in the spring to the Colonial and Indian Exhibition in London, where it has been an attractive object to visitors throughout the summer. In the work of preparation most valuable aid was rendered by one of our esteemed fellow members, Mr. J. Alston Moffat, who devoted many weeks of consecutive labour to this end. Mention should also be made of the valuable aid rendered by our esteemed Secretary-Treasurer, Mr. E. Baynes Reed, and of his son Lawrence, also of a member of our Council, Mr. J. M. Denton, for it is to the combined efforts of these several individuals that our great success has been mainly due.

In bringing these brief remarks to a close, I desire to refer to the pleasure it has given me during many years past to fill to the best of my ability the post of honour in which, year after year, you have been pleased to place me. Public duties of an important character, which I have recently undertaken, will, from this time forward, necessarily engross all my time, and in case my name should be mentioned again in connection with the position of President, I beg to state frankly that I shall be no longer able to serve you in this capacity. I regret also that I shall be compelled to relinquish the work of editing the *Canadian Entomologist*, a position which I have long filled with much pleasure to myself and, I trust, with some acceptance to the Society. In taking leave of the many kind friends who have rendered so much assistance to our journal by their valued contributions, I would, while sincerely thanking them for past favours, bespeak for my successor a continuance of their kind services.

With many thanks for all past favours,

I have the honour to be,

Your obedient servant,

WM. SAUNDERS.

Moved by Mr. Fletcher, seconded by Rev. Thos. W. Fyles,

That the society learns with regret that their esteemed friend, Prof. Saunders, has found it necessary to withdraw from the Presidency of their body, and also from the Editorship of their organ, *The Canadian Entomologist*; but recognizing the importance of the work Prof. Saunders has been called upon to superintend, and the wisdom of the choice made in him by the Government, it congratulates the Professor upon this recognition of his abilities and zeal in the public service, and respectfully tenders to him a Life Membership in the society.

The resolution was carried unanimously by a standing vote.

ELECTION OF OFFICERS.

The following named gentlemen were duly elected as officers of the Society for the ensuing year:

President.—James Fletcher, Ottawa, Ont.

Vice-President.—Rev. C. J. S. Bethune, M.A., D. C. L., Port Hope, Ont.

Sec.-Treas. and Librarian.—E. Baynes Reed, London, Ont.

Council.—W. H. Harrington. Ottawa; Rev. T. W Fyles, Quebec; J. Alston Moffat, Hamilton, Ont.; G. J. Bowles, Montreal; J. M. Denton, London, Ont.

Editor "Canadian Entomologist."—Rev. C. J. S. Bethune, Port Hope.

Editing Committee.—Wm. Saunders, Ottawa; J. M. Denton, E. Baynes Reed, London, Ont.; Capt. Gamble Geddes and Dr. White, Toronto.

Auditors.—W. E. Saunders, H. P. Bock, London.

Delegate to Royal Society.—W. H. Harrington, Ottawa.

On motion of Mr. E. B. Reed, seconded by Mr. A. W. Hanham, the Society resolved that all ex-Presidents of the Society be ex-officio members of the Council.

Rev. Mr. Bethune, and the Sec.-Treas., gave a report of the meeting of the Entomological Club of the A. A. A. S., at Buffalo, which they had attended.

Dr. White introduced the question as to whether the interests of the Society would be better served by making its headquarters at Toronto, where possibly a larger work might be carried on than in London; his idea being that by lectures on economic entomology in the different educational institutions the science might be brought forward more prominently, and thus attract greater attention from students.

Capt. Geddes, also of Toronto, while agreeing in the main with the previous speaker, suggested that Toronto should first form a branch society, and thus manifest an interest in entomology, which would bring its claims more prominently before the people and scientific gentlemen.

Mr. Fyles thought, without drawing any comparison between the two cities, Toronto and London, that London, as the centre of one of the most important farming sections of the Province, was a more appropriate locality for the headquarters of the Society than Toronto.

Mr. Reed was glad when any subject was discussed that would tend to widen the usefulness of the Society. The main object of the formation of the Society was to promote the knowledge of practical entomology among the farming community, while at the same time the Society was gradually doing good work in the prosecution of the more scientific portion of the study. He thought the above-named object was better served by keeping the Society in its present condition than it would be by any alteration in its scheme of working in a more purely dry scientific direction.

Rev. C. J. S. Bethune felt that the right nail was struck on the head by Capt. Geddes in proposing that a branch be formed in Toronto. He suggested that Capt. Geddes and Dr. White endeavour to form a branch there. He thought the removal hardly practicable, and the Society would never consent to be merged into any other society. He understood that many gentlemen in Toronto were willing to help on the scheme of lectures, which should, he thought, aim rather at interesting the outside public than at the instruction of advanced students. The matter might be left in the hands of the Editing Committee and the Council to make an effort to start them.

Mr. E. B. Reed thought that the Government might be induced to give a grant in addition to the one already received to assist these lectures.

Dr. White was in favour of getting the study introduced in the educational system of the Province.

Dr. Wolverton spoke in favour of keeping the headquarters in London until Toronto had as large or a larger society. While Toronto was the seat of learning there were too many other institutions there, and amongst them the Entomological Society would dwindle down to almost nothing.

Mr. J. M. Denton reminded the meeting that the London people had made the collection, and the library, such as it was, and so far this city was the leading centre in this respect.

On motion of Mr. Denton, seconded by Dr. Wolverton, Dr. White and Capt. Geddes were requested to obtain all necessary information respecting public lectures on entomology under the auspices of the society, and to report to the Editing Committee at their earliest convenience.

Mr. E. B. Reed read a letter from Miss E. A. Ormerod, Consulting Entomologist to the Royal Agricultural Society of England, thanking the Society for a copy of their sixteenth annual Report, and referring to the discovery of the Hessian fly in England.

Rev. T. W. Fyles read a short paper on a saw-fly larva, *Hylotoma dulciaria*, which he found attacking the foliage of the white birch in Quebec.

At 11.30 p.m. the meeting adjourned to the following morning.

The meeting re-assembled Thursday at 10 a.m.

Mr. A. W. Hanham read a paper "on the Stridulation of *Geotrupes Blackburnii*."

Capt. G. Geddes read a paper "Notes on the Genus Colias in the *imago* or perfect state."

Mr. Fletcher thought it possible that *C. Hagenii* is a tetramorphic form of *C. Eurytheme*, and made further remarks on Capt. Geddes's paper.

Capt. Geddes asked if *Argynnis chariclea* and *Argynnis Boisduvallii* had been taken east of the Rocky Mountains in Canada.

Mr. Fletcher said that *A. charilea* had been taken at Neepigon and Hudson's Bay.

THE HOME OF CHIONOBAS JUTTA.

BY THE REV. T. W. FYLES, SOUTH QUEBEC.

Rev. T. W. Fyles read the following paper on "The Home of *Chionobas Jutta*."

To the north-west of Bergerville, in the vicinity of Quebec, lies a tract of country known as the Gomin Swamp. It derives its name from a French physician and botanist, who, 200 years ago, took up his residence in that locality, to study its flora, which is remarkably rich. I was informed, some time since, by the President of the Montreal Branch of our Society, that the Gomin Swamp was the only known place, in the immediate neighbourhood of Quebec, in which *Chionobas Jutta* could be found. He furnished me with a pen-and-ink map of the approaches to the swamp, and, very accurately, named the time of the appearance of the insect as that from the first to the fifteenth of June. The weather being particularly favourable, on the 31st of May, of the present year, I set out on an exploring expedition, accompanied by a gentleman from England who was visiting me. Following the directions given me we found the place. It is skirted by a thick and tangled growth of scrub, through which a few cattle-tracks lead into the swamp itself. Which of these tracks to choose we did not know, for time and changes had made some confusion in the land-marks. We asked a "canny Scot," who happened by, to tell us what to do; but he would not venture an opinion. Indeed, he seemed to think it *infra dig.* to be questioned on such a trivial matter. We then applied for information to two children of the Emerald Isle—father and son—who, with the ready kindness of their race, were profuse in their directions. Unfortunately they differed in opinion—the council was divided. In questions of locality, it is always wise to take the opinion of the bird's-nesting, hare-and-hounds part of the community, so we chose the route pointed out by the son. But what a route! I began to despair for my English friend's immaculate broadcloth at the very outset; and, the further we went, the worse we found it, until we were—I was going to say *lauded*—but, until we were *fairly swamped* in the swamp itself. Did you ever experience the pleasant sensation of sinking deep in sphagnum, and feeling the cold marsh water ooze over the tops of your boots, and churn and gurgle between your toes? Gloomy thoughts oppressed my mind, as I looked at my friend, of the traveller in Ireland, who found a hat on the surface of the bog he was crossing, and, lifting it, found a head beneath, at which he tugged by the hair, until he brought up a man, who coolly asked him to bear a hand for his horse was below. My first thought was to place my companion in a position of safety. I looked round, and noticed in the

distance a growth of young birches, which seemed to indicate a dryer spot. What work we had to reach it! How exhaustively we studied, with reference to our surroundings and their appearances, the degrees of comparison of the adjective *treacherous*. At length we reached our goal. We found it to be a ridge thrown up, for drainage purposes, by the owners of the land beyond. We took off our boots, and emptied them of water, and then proceeded to refresh the inner man. After a while, I left my friend to make acquaintance with the swamp mosquitos (who were disposed to be quite familiar), and went in search of *C. Jutta*. Relieved from fraternal cares, I now could give my attention to the surroundings. What wonderful prospects did these present! The whole marsh was aglow with the rosy flowers of *Rhodora Canadensis*, that charming plant whose

"Beauty is its own excuse for being."

The clustered pitchers of the *Sarracenia purpurea* (a plant named after another French botanist, Dr. Sarassin) tufted the surface of the moss; and, all around, the stemless lady's slipper, *Cypripedium acaule*, displayed its elegant blossoms. Suddenly a fluttering brown object arose before me, made a short flight, and then settled a few yards away. I noticed the mottling of the underwings, brought down my net, and, shouting to my friend "I have it," captured my first specimen of *C. Jutta*. Soon a second specimen arose; but another insect-admirer was in the field who was more agile than I. A specimen of the King Bird, *Tyrannis Carolinensis*, gave chase to the butterfly, and, after much doubling and twisting, caught it, and disposed of it effectually. It was long before another specimen rewarded my search; but at length a third did make its appearance, and I had the good fortune to secure it. By this time my muscles were so strained by the uncertain footing that every movement gave me pain, and I was obliged to abandon the hunt for that day. I rejoined my companion and set out for home, very wet, and very tired, but possessed by the proud consciousness that I had captured *Chionobas Jutta*.

Captain Geddes said that his only captured specimen of this insect was identified by Mr. W. H. Edwards, and was taken in the Rocky Mountains at a great altitude.

NOTES ON LARVÆ OF *MALLOTA POSTICATA*.

Mr. Lawrence Reed read some notes on "Larvæ of *Mallota posticata*," as follows:—

During the recent heavy gale of October 15th a large limb of a maple tree, standing in our boulevard, was blown down.

While removing it the next day I noticed that the centre of the limb, from the fork where it was attached to the tree was much decayed, for about one foot from the top.

Thinking this had been caused by some of our wood-boring beetles, I examined the black casting which seemed to fill up the hole, and discovered some twelve or thirteen larvæ embedded rather firmly in the pithy substance. These are, I think, the maggots of some dipterous insect, and from their rat-tailed appearance they belong to some species of Heliophilus. Upon placing some of the larvæ in water, the tails were observed to come to the surface of the water, as it is said, for breathing purposes. We find a Heliophilus mentioned in Edwards, Plate 7, figure 28. Harris also gives an account of the larvæ, saying:—"The larvæ of a few are aquatic, and are provided with very long, tubular tails, through which they breathe, and have been called rat-tailed maggots. Some of the largest and most beautiful of these flies live, in the maggot state, in rotten wood."

Professor Lintner has given a full description of the insect in his First Annual Report of the New York State Entomologist, 1882, page 211, and named it as above.

THE DESTRUCTION OF INSECT LIFE BY THE ELECTRIC LAMPS.

BY PROFESSOR CLAYPOLE, AKRON, OHIO.

The following paper was also read for Professor Claypole "on the destruction of insects by electric light."

In the early part of the year 1885, an installation of about one hundred electric lamps was established in the city of Akron, O.* It soon became evident that these lamps would prove a fine field for entomological work. Several members of our Scientific club accordingly watched them through the summer with great success. One point that came under my own observation seems deserving of notice as showing the enormous destruction of insect life by this new mode of illumination.

It was by no means an unusual occurrence to find in the morning the glass globes from a quarter to half full of various kinds of insects. Most of these were more or less burnt, but from the charred mass good specimens were frequently obtained, and many in a state sufficient for identification.

A single instance will illustrate my purpose now. On different days I took from every lamp examined more than one hundred specimens of the little grass moth (Crambus mutabilis, Clem). This gives a total from 110 lamps of more than a million individuals destroyed during the three months, or 100 days, of their occurrence. This large number must be largely increased by those, probably as many, which were totally consumed, and left no trace behind.

Other insects were also destroyed in numbers nearly as great, especially several species of the Tiger Moths.

It would most naturally be expected that so wholesale a slaughter of insects, the greater part of which had probably not laid any eggs, would be followed by a diminution of their number. Accordingly this season has somewhat disappointed our expectations from this source. The swarms around the lamps have been much smaller than in 1885.

It is also worthy of notice, that it has become a matter of common observation that the number of insects coming into the houses during the summer evenings has been very much reduced by, or since the introduction of the electric lamps.

It may therefore follow that one result unexpected, and uncalculated, may follow the change in the mode of illumination. We may largely reduce the number of our insect plagues in towns. Of course, this can only apply to those that are attracted to the light—a large number—but not the most annoying. The mosquito, for example, has no special love for the lamps.

ENTOMOLOGICAL CLUB OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The Club met at Buffalo, N.Y., on August 17th, 1886, at the rooms of the Buffalo Society of Natural History, fourteen members being present.

The session continued at intervals during the meeting of the A.A.A.S. The following persons were in attendance during the meeting:—J. A. Lintner, Albany, N.Y.; J. H. Comstock, Ithaca, N.Y.: S. A. Forbes, Champaign, Ill.; L. M, Underwood, Syracuse, N.Y.; T. B. Stowell, Courtland, Ill.; Rev. R. Benjamin, Cincinnati, O.; E. W. Claypole, Akron, O.; Dr. J. B. Tweedale, St. Thomas, Ont.; D. S. Kellicott, E. M. Chamot, O. Reinecke, C. D. Zimmerman, Ph. Fischer, E. P. Van Duzee, Buffalo.

The Entomological Society of Ontario was duly represented by Mr. Wm. Saunders, Rev. C. J. S. Bethune, Mr. J. Alston Moffat, and Mr. E. Baynes Reed.

The President, Professor J. A. Lintner, took the chair, and Mr. E. B. Reed acted as Secretary in the absence of Mr. J. B. Smith, of Washington.

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* See report of the Entomological Society of Ontario for 1885, page 19.

The President gave his annual address, which was a very able review of the progress of entomology, as shown in publications which have appeared since the last meeting.

Professor Lintner also alluded to the absence of some who were usually attendant at the Club meetings, referring especially to Professor C. V. Riley, who was then in Europe for the benefit of his health.

Dr. D. S. Kellicott, on behalf of the Buffalo Society of Natural History, placed the rooms at the disposal of the members of the Club.

The President paid a high compliment to the contributions to entomology that had emanated from the rooms where they were meeting.

Professor Comstock explained a new method of arranging collections by which loss of time is avoided in transferring specimens so as to make room for additional species, or making necessary changes in their arrangement. The main feature in this plan consists in having moveable blocks on which the insects are pinned, but made in sections to fit the cases.

The following officers were elected for the ensuing year :—

President.—Professor J. H. Comstock, Ithaca, N.Y.
Vice-President.—Professor S. A. Forbes, Champaign, Ill.
Secretary.—Mr. E. Baynes Reed, London, Ont.

The following is a summary of papers read before the meeting during the session :—

Professor S. A. Forbes—Notes of the Past Year's Work : The Hessian Fly, *Cecidomyia destructor* has been found to hibernate in Southern Illinois as a naked white grub, not forming puparium until May following, and emerging before harvest ; these are probably the offspring of a mid-summer brood, which develop in volunteer wheat. The Clover Seed Midge, *C. leguminicola*, was observed first in 1879 in Illinois. A new Chalcid parasite, *Tetrastichus*, has been reported, but its worst enemy so far observed was *Triphleps insidiosus*. The young of this species are often so abundant on the clover heads as to be mistaken for the injurious midge, but a little observation will show their beneficial character. The Wheat-stem Maggot, *Meromyza Americana*, is shown to have three broods instead of two only. Eggs and half-grown larvæ were found in abundance, August 4th. Two species of *Melanotus*, *communis* and *cribulosus*, were bred to maturity, and a third Elaterid not yet determined, of which figures and precise descriptions have been prepared. Larvæ of these, and of *Agriotes mancus*, and of a *Cardiophorus*, were reported as injurious to Indian corn, the peculiar larvæ of the last boring the roots in all directions in sandy soil. *M. cribulosus* pupates in July and forms imago in September. The Corn-root Worm, *Diabrotica longicornis*, is reported as seriously affecting crops in Southern Illinois. The common pale Flea Beetle, *Systema blanda*, was bred from larvæ feeding on kernels of sprouting corn in the earth. *Epicærus imbricator* taken feeding on leaves of pear ; eggs laid in single layer on leaves, concealed by the insect fastening together the opposed surfaces of the leaves. Larvæ of *Sphenophorus parvulus* found to infest the roots of meadow grass (timothy). The midge sucks the sap from stems of wheat and corn. The Corn-plant Louse, *Aphis maizis*, was very injurious ; observation shows that they are strictly dependent on the ant, *Lasius alienus*, which mines along the principal roots, collects the plant lice and conveys them into these burrows and there watches over and protects them. The ants have nothing to do with the hibernation of the lice, their winter nests never containing them in any form, either in corn-fields or other situations ; the facts indicate that the lice hibernate as wingless females on the earth of fields previously infested. The Currant Worm, *Nematus ventricosus*, was mentioned as a case of retarded development. Mr. Bethune had noticed a similar case in *Attacus promethea*. The Root Web-worm, *Crambus zeellus*, was very destructive to corn in Illinois. A detailed description was given of its earth nest and the method and character of injury done to corn by this species. It hibernates as a larva, pupates in a tubular nest in June, emerging June and July.

A paper was read from H. Garman : Contribution to Life History of *Aphis maizis*.

Paper read from W. L. Deveraux : A Dangerless Insecticide for Collecting Bottles. The best vegetable container of prussic acid is the bark of the wild cherry, *Prunus serotina*, to be used for the Serotina bottle for young collectors, like the Laurel bottle of European entomologists.

In the discussion that took place,

Professor Forbes stated that the attacks of *myrmis* had considerably lessened the number of grasshoppers in Illinois.

The President called attention to the unusual number of Aphides in New York State. They had been found on apple, black currant, tomato, and on potato in the Eastern States. The hop crop was almost destroyed by them in New York.

Mr. Bethune had also found them very numerous on the north shore of Lake Ontario.

In reply to a question, Professor Lintner stated that European entomologists had come to the conclusion that the Aphis of the wild cherry and the hop were identical.

Mr. Fischer called attention to the probable identy of *Spilosoma fuliginosa* and *rubricosa*. He also exhibited a specimen of *Catocala obscura*, just taken by him for the first time in Buffalo.

The President called attention to the fact of the earth worm being the host of a parasite, and therefore dangerous to fowls and poultry.

An excursion of members of the Club took place to Ebenezer, where a very pleasant afternoon was spent, and some interesting captures were made, among the most interesting being *Cicindela ancocisconensis*.

The Club adjourned to the call of the President at the next meeting of the Association.

POPULAR PAPERS ON ENTOMOLOGY.

THE OAK-PRUNERS: ELAPHIDION PARALLELUM, Newm., AND PHYMATODES VARIABILIS, Fab.

BY C. H. T. TOWNSEND, CONSTANTINE, MICH.

In last year's Report I noticed with interest the article by Mr. Clarkson on *Elaphidion villosum*, Fabr. I have reason to believe that the same is partly the case also with *E. parallelum*, Newm., which I find to be the common oak-pruner here. But I do not agree that it is always, or even in the majority of instances, the case with either species. As bearing on this subject I give the following extract from my notes for 1885, which relates also to *Phymatodes variabilis*, Fab.:—

"Last fall (Sept.) I laid in a large supply of red, white and black oak and hickory twigs, containing larvæ of oak-pruners. The majority were red oak and hickory, but all were kept in separate boxes. Also a large box full of sawed hickory wood which contained wood-boring larvæ, These were all kept regularly moistened. During May and June, as I was absent from home at the time, another person, a lady, collected and saved for me a bottle full of beetles from the vicinity of these boxes (all taken from and around the large box of hickory wood, she says). These I afterward examined, and found the bottle to contain 145 *Phymatodes variabilis*, Fab., and 18 *Elaphidion parallelum*, Newm., besides two *Tenebrionidæ* of uncertain origin. As to which the two species proceeded from, the twigs or the hickory wood, the lady, who examined the twigs from time to time without being able to discover a single specimen among them, is almost certain that they all came from the large box of sawed hickory, on the underside of the papers covering which she was able to pick them off in large numbers, as well as all over and around the box and on the wood inside. Upon examining a good number of the twigs of each kind later in the season, I found not an insect in them (with the exception of one which contained a dried and shrivelled larva that had not transformed), but they showed every sign of the insects having emerged as perfect beetles. The *E. parallelum*, Newm., must have come from the twigs, while the *P. variabilis*, Fab., all proceeded from the sawed hickory wood. Backard gives the latter species as living only in white oak, but I am confident that these came from hickory, though I cannot conceive what became of the other numerous *Elaphidions* which must have emerged from the twigs."

In my notes for 1884, under date of 18th September, I extract also the following:— "Found an oak-pruner in the pupa state, inclosed in its silken white cocoon, inside a red oak twig. The end of the twig was not closed up, as is usually the case, but the passage was open, and a couple of inches up from the end the larva had changed to the pupa state, leaving its cast off skin below it in the passage."

Upon reading the account by Dr. Fitch, of *E. villosum*, Fabr., I find he says that "some of the worms enter their pupal state the last of autumn, and others not till the following spring. Hence, in examining the fallen limbs in the winter, a larva may be found in one, a pupa in another." Now, though I have found the pupa of *E. parallelum*, Newm., very early in the fall (18th Sept., as stated above), and Mr. Clarkson has found the imago of *E. villosum*, Fabr., in November, I am inclined to think that these early metamorphoses were from eggs deposited earlier than others, or that by some favourable circumstances these individuals developed more rapidly and thus metamorphosed earlier It is my opinion that both these species may assume the imago state either in the fall or the following spring, some, more forward than others, attaining this state in the fall. Perhaps favourable years, when some of the eggs may be deposited earlier in the summer than usual, produce the autumn imagos, which then remain within the twigs during the winter and emerge early in the spring. These in turn, if the season is at all favourable, will lay their eggs earlier than the others, and thus continue the early metamorphosis.

Toward the conclusion of his account Dr. Fitch says that "in at least three-fourths of the fallen limbs no worm is to be found," it having been devoured by birds either at the time the branch fell or afterward. The ground under oak and hickory trees here I have known some years (1884) to be covered with the twigs early in September, blown down by heavy winds, and at such times nearly all of the larvæ are destroyed by insectivorous birds, which extract them from their burrows, if they have not already been dislodged. This explains why so few of the beetles were obtained from the twigs I had saved—only 18 beetles from a large supply of the twigs, every one of which had certainly fallen that season, and been occupied at the time—the birds had destroyed all the others, and that very soon after their fall! But I cannot concur in the view taken by Dr. Fitch, that the larva severs the branch that it may fall to the ground, thus to aid its transformation. It is very probable that the larva cuts the twig to stop the flow of sap, the dead wood being necessary to mature its growth, and is conscious of none of that "consummate skill and seemingly super-terrestrial intelligence" which the worthy Doctor so enthusiastically attributed to it.

NOTES OF 1885 ON SOME INJURIOUS AND OTHER COMMON INSECTS.

BY JOHN G. JACK, CHATEAUGUAY, QUEBEC.

Read before the Montreal Branch Entomological Society of Ontario, 9th February, 1886.

The past season was remarkable, in our locality, for the general scarcity of diurnal Lepidoptera, and also of many of the Coleoptera, especially among the Scarabeidæ, Cerambycidæ and Buprestidæ. Many species of these, usually plentiful, seemed rare this year, and even *Lachnosterna fusca* was not nearly so abundant or injurious as it is generally. Perhaps, with the exception of *Colias philodice*, the most common butterfly was *D. archippus*, which I have never seen so common. I do not think I saw a single specimen of *P. cardui*, although it was very abundant last year. *Pieris rapæ* was less numerous and appears to be decreasing in numbers every year, largely owing, no doubt, to the attacks of the parasite *Pteromalus puparum*. The birds also, especially the Fly-catchers, do not get full credit for the good work they do. Insects of all other orders seemed to be about as abundant as usual, and several species proved to be more than usually numerous and destructive.

The Buffalo Tree-hopper (*Ceresa bubalus*, Say) was again very abundant, doing very much injury to apple and pear trees in young orchards. On July 5th I found some larch trees (*Larix Americana*) with the foliage very much destroyed by saw-fly larvæ, and on examining the trees in the woods and surrounding country, I found that they were all attacked. At this time most of the larvæ seemed to be a little more than half grown, and they continued to feed until about July 15th, when some of them made cocoons. Many of the trees were now entirely defoliated, and the branches and twigs literally covered with the larvæ, many of which were dropping to the ground, and with the falling "frass" made a sound like that of fast falling rain drops. Three days later (July 18) very few of the larvæ were to be found, most of them having formed cocoons among the old leaves and debris, or in the loose surface soil at the base of the trees or in the vicinity. When collecting some of these cocoons on July 19th, I found that very large numbers had already been collected and the larvæ taken out by some small animals, probably mice and moles, as there was a perfect network of small burrows under the old leaves and grass. The empty cocoons were collected into little heaps, and a very large handful could often be gathered at a single grasp.

Having been kept in a moderately warm room, some of the imagines emerged from the cocoons on December 22nd, and continued to do so almost daily until January 17th of

this year. The larvæ, cocoons and imagines agreed exactly with the figures of *Nematus Erichsonii* (Hortig), in Professor Riley's report to the U. S. Department of Agriculture for 1883.

I had noticed these larvæ on the larch trees in former years, but they were not so generally abundant, and I had not the opportunity to study them.

My father has told me that about thirty years ago the tamarack woods were entirely defoliated, and looked as though scorched by fire, and he thinks that the saw-fly larvæ were probably the cause. It was more noticeable at that time, as there were large tracts of land covered with tamarack forest that have now entirely disappeared.

Another insect has proved to be peculiarly injurious this season to young growing beans. It is a small dipterous fly, and specimens sent to Professor Riley were determined by him as *Anthomyia angustifrons*, Mirgen (=*A. calopteni*, Riley), the larvæ of which have been hitherto known to feed upon the eggs of *Caloptenus*. During the past summer the larvæ attacked a field of golden wax-beans that were planted about June 15th, and on that part of the field that was most seriously injured, at least nine-tenths of the crop was destroyed. About ten days after planting, as very few of the beans had grown to the surface of the ground, an examination was made for the cause, and it was found that nearly every bean was infected by from 1 or 2 to 20 or 25 small, long, white maggots. Some of the beans attacked had hardly sprouted, while most of them had grown from one to two inches, but being planted deeply, they had scarcely reached the surface. Both the stems and seed-leaves were attacked. These larvæ were first noticed on June 25th; by the 28th many of them had pupated, and hardly a maggot could be found after July 2nd. The flies emerged about July 10th. If this bean-feeding habit of the insect should become general, it might prove very annoying.

Grasshoppers of several species were very abundant and injurious, hundreds of bushels of grain having been destroyed by them, while pasture and grasses were much injured, and many young fruit trees were defoliated. Some farmers reported in early September that their buckwheat had been so devoured by grasshoppers that only the stumps of the stalks remained.

Cicada canicularis Harr. was not so common this season as it has been some years.

Females of the fall canker-worm moth (*Anisopteryx pometaria*) were taken depositing eggs on apple trees, Nov. 21-24. This insect is not common in our part of the country, and is not noticeably injurious.

Larvæ of the pear-tree slug (*Selandria cerasi*) were found as late as October 30th, or later. They are not abundant and give us no trouble.

The fall web-worm, *Hyphantria textor*, has become more abundant and troublesome during the past three or four years. Young larvæ were first noticed July 10th, and new lots continued to hatch until about the middle of August.

A fresh specimen of the cotton moth (*Aletia xylina*, Say) was taken September 19th.

On July 12th, a large number of small parasitic flies emerged from a dead cut-worm (Noctuidæ). These parasites are evidently the *Copidosoma truncatelluu* Dalman, which is so well figured by Professor Riley in his Report to the U. S. Department of Agriculture for 1883.

Early in December I took a living specimen of *Cyrtophorus verrucosus* Oliv. in the wood of the wild red cherry (*P. pennsylvanica* Linn.), and also found a large number of larvæ which I think were of the same species, as they occupied similar cavities to that of the beetle. The larva of a Lepidopterous insect (probably Ægerian) was found under the bark of the same tree.

On December 8th, a living pupa of *Tremex columba* was taken from the heart of a green beech log, the log being over ten inches in diameter. At the same time larvæ of *Saperda calcarata* were taken from the heart of *Populus tremuloides*.

NOTES ON CERESA BUBALUS, Say.

BY JOHN G. JACK, CHATEAUGUAY BASIN, QUE., CAN.

Read before the Montreal Branch Entomological Society of Ontario, 9th February, 1886.

During the past two years, but more especially this season, we have been very much troubled and annoyed by the attacks of the Buffalo Tree-hopper (*C. bubalus* Say) on the young trees in the orchard. Most of the trees have been seriously injured by having the bark cut up by the ovipositors of these insects, when depositing their eggs. These incisions and the eggs in them were so numerous that in many cases it was impossible to raise the bark for the purpose of "budding" the trees.

The incisions and eggs are usually most abundant on the south and upper side of the limbs, comparatively few being found on the shady or under sides. The first imagines were noticed in the orchard on July 16th, and a few days later they became quite abundant. On the young tender twigs of the apple trees, especially those nearest to the ground, large numbers of the insects were found busily extracting the juices with their tender beaks. Upon close examination the twigs plainly showed the traces of their punctures. They were also very abundant on beans, potatoes and several kinds of weeds, in many cases completely covering the stems, and all engaged in feeding upon the juices of the plants. Bean-stalks that were attacked in this way were considerably injured, as numerous dark knotty formations occurred at the places that were much punctured, so that the growth of the plant was decidedly checked.

The insect was first noticed depositing eggs about August 12th, and a few incisions were then to be found on the branches. This depositing of eggs continued until October 8th, when a severe frost killed a great many of the tree-hoppers, although a few escaped and continued the work until October 26th. After that date they were not noted.

Some of the eggs of the season of 1884 were collected last spring and kept in a very tight box. They were hatched during the first week in June, and with them were a number of small Dipterous flies, evidently parasites upon the eggs of *Ceresa*. I watched for these parasites in the summer and autumn, and first found them August 31st, on limbs where the tree-hoppers were depositing eggs. The parasites were found in larger numbers a little later, and I had the satisfaction of distinctly seeing a number of them insert the abdomen and sometimes almost the entire body deeply into the gaping slits made by the ovipositors of the tree-hoppers. Professor Riley thinks that the parasite may be an undescribed species.

As I did not know the best conditions or food for the young larvæ of *Ceresa*, I placed them in a glass jar and gave them the tender twigs and leaves of apple trees. From these they seemed to extract the juices, and they could be seen in rows on the ribs of the leaves, with extended beaks, while little particles of a clear gummy substance were often found at the places where the insects had been sucking the juices. I afterwards added bits of grasses, etc., to their food, but after some time they ceased feeding, and finally they all died, none of them being more than half grown. This was about July 5th, and about this time I found a number of the larvæ about some raspberry canes in a shady place, and on July 13th I took more of them among low juicy grasses and thistles, growing thickly in a cool, moist place, several rods from any trees of any kind. On July 17th, nearly all these larvæ changed to the adult form.

The larva becomes much elongated as it begins to cast the last envelope, and one of them, noticed when just beginning the operation, took three hours to complete it.

The full grown larva is about 8 m.m. in length, and light green in colour, somewhat lighter than the mature insect. The young larvæ appeared to be of a darker green than they were at a later period of their growth. The general shape is triangular, like that of the mature insect, but the broad horn-like projections are not seen in the larva. The eyes are prominent. On the front of the elevated thorax, and behind each eye, are two short, strong spines, one above the other, armed with several lateral prongs or forks; higher up, near the apex of the triangular shaped thorax, are two more, somewhat larger armed spines,

and the last two visible thoracic segments are each provided with a pair of these branching spines that are still longer. There is also a pair of these spines, each armed with about 6 or 7 barbs, on each of the abdominal segments next to the terminal. These are graduated in length, the shortest being on the last segments, and the longest hardly more than a millimeter in length. The thoracic spines project forwards, while those on the abdominal segments are drawn forward at the base and then curve back, strongly suggesting the dorsal fin of a fish. On the last segment, which is long and tapering, there are two short armed spines directly above the anal opening, which is terminal. The ventral surface of the abdomen is scatteringly covered with short, strong bristles or hairs. The legs are also covered with stiff hairs.

The eggs, in batches of from five or six to a dozen (rarely more), are deposited obliquely in the bark, and often the incision continues into the wood, if the bark is thin. In this way the bark and wood become fastened together, and will not separate at any season, and the dark spots in the wood and the rough knotty bark bear evidences of the injuries for many years.

The eggs are of a dirty transparent white, about 1.5 m.m. in length, smooth, slightly tapering, and sharply rounded towards the interior end, but tapering much more gradually at the exterior end. Although normally round, the sides are generally found to be more or less flattened by pressure from the tissues of the wood and bark of the tree. So numerous were these eggs on some trees that a careful estimate shows that there must be at least from six to eight hundred eggs in a section of the branches not more than an inch long and half an inch in diameter.

I have not been able to find a remedy, and perhaps the best is to destroy as many of the egg-bearing limbs as possible. It is to be hoped that the little parasitic flies will increase, and this seems probable. On September 17th I found five or six tree-hoppers ovipositing on a piece of branch about four inches long, and on the same section were twelve or fifteen of the parasitic flies.

NOTES ON ANT LIONS.

BY J. ALSTON MOFFAT, HAMILTON, ONT.

As my former notes on the Ant Lions were of interest to some of our readers, perhaps a few additional particulars on the same subject may not be objectionable to them. Having had another opportunity of observing their habits, I made the best use I could of it. The abdomen of the nymph is somewhat heart-shaped, flat beneath and very much rounded above, thickest near the thorax, and sloping off suddenly to the sides and tail, which is an acute point. The thorax is long, and with the head is narrow and flat above, a form no doubt well adapted to its requirements. Its mode of travelling is backwards, always "advancing to the rear," one side contracted, which produces a circular movement, so that when one was placed in the centre of the palm of the hand, it made two rounds before it dropped over the side. As soon as it touched the sand it put itself instantly out of sight under the surface, where it lay for a short time perfectly quiet. When it began the formation of its pit, which I watched to its completion, it commenced by a jerk of the head and thorax, which threw the sand off and exposed them to view. It lowered them at once, made a sudden start back, when the sand covered them; then another jerk and another backward move rapidly executed, always throwing the sand to the outside. In its first round it described a circle of about an inch in diameter, reducing the circle with each round. A mound was formed in the centre and the sand ran into the trench from both sides, and thus it worked away without a halt until the mound was all thrown out, and the pit had assumed the funnel shape, when it took a rest, after which it began throwing out the sand from the centre at its leisure, deepening and widening the pit very much. The time occupied in the first part of the operation may have been about half an hour.

One that I was watching, after it had made nearly a round in commencing a pit, seemed to be dissatisfied with the location, and started off on a prospecting tour to find one

more to its liking. Its course was quite discernible by the disturbance of the surface sand, although it never appeared in view. In its travels it met an obstruction, a piece of broken pine limb about four inches long and an inch and a-half in diameter, imbedded about an inch in the sand. Against this it struggled until it raised it out of its bed, moving one end along an inch and a half, when it was sufficiently elevated to permit the nymph to pass on without going below its ordinary depth. It had travelled hither and thither over a space of twelve or fourteen inches without stopping, before I left it. It is most amusing to place one on its back and watch it get on its feet again. Although I am afraid the operation is quite indescribable by me, I can tell what it does not do ; it does not spring up like like an Elater ; it does not stretch out its legs as beetles generally do, they being very short, it could not nearly reach with its feet the surface on which it is lying ; it does not seem merely to roll over, for when it has got on its feet, it is in the identical spot it was when on its back. But while one is watching it attentively, it suddenly assumes that hazy, indefinite appearance that anything will when in rapid vibration, and when again distinctly seen it is resting quietly on its feet, but what it did more than vigorously shake itself, or how it accomplished the "presto change," I cannot say. I watched it again and again but could make nothing more of it.

The species to which these nymphs belonged would be either *abdominalis* or *obsoletus*, and they must have been nearing maturity, as some were out on the wing at the time. I took two *abdominalis*, one of them with a most unseemly length of abdomen, extending full three-fourths of an inch beyond the wings, which I take to be a female.

OCCURRENCE OF THE CHINCH-BUG *(BLISSUS LEUCOPTERUS*, Say) AT BUFFALO, N. Y.

BY E. P. VAN DUZEE.

This pernicious insect has been very abundant here for many years. As early as 1874 I found it in considerable numbers among moss on dry, grassy hill-sides at Lancaster, N.Y. This season (1886) it was remarkably abundant in a dry upland hay field near the same locality. I have also taken it at Ridgeway, Ont. Ordinarily the short winged form predominates, but in hot, dry summers, such as those of 1881 and 1886, they mostly acquire fully developed membranes. I find on comparison with a lot of perhaps one hundred fully developed examples from Kansas, that ours are quite uniformly larger and more robust, with longer hairs on the pronotum.

Professor J. A. Lintner says (Second Annual Report N. Y. State Ent., page 150) that, previous to its appearance in St. Lawrence county in 1882, the only recorded occurrence of this insect in New York State is that mentioned by Dr. Fitch (Second Report, 1856, p. 287). From this it appears that it has not been recorded, if indeed it occurs generally in this State. Its early introduction at this locality is only natural, considering the immense grain traffic which yearly passes through this city direct from the infected States of the West, on its way to the seaboard ; yet it does seem strange that its first appearance in sufficient numbers to attract general attention should have been in Northern New York, quite aside from any of the main lines of transportation, unless, as Professor Riley suggests (Science, vol. ii., p. 621), it be a native species, which, through an unusual series of favouring circumstances, has increased enormously in certain localities. That it has not been reported as an injurious insect in this locality seems to me no proof that it has not been injurious. To be sure, it has not appeared in such overwhelming numbers as to force itself upon public notice as in other places, but from my own observations I think that no inconsiderable part of the injury to hay fields charged to the dry weather is in reality the work of this insect, or rather the combined effect of the two. For example, the hay field at Lancaster mentioned above, which last year yielded an abundant crop, is literally ruined and will have to be plowed under in the spring, while other fields less protected, where the bug was not found in numbers, escaped injury ; and I know of several other fields near this city apparently affected in the same manner.

I have always found this insect in hay fields, generally in timothy or clover, occasionally among wild grasses. I do not recollect ever having taken a specimen in a grain field of any kind. If it has so thoroughly acquired the habit of subsisting upon the cultivated cereals in the West why should it not affect the same plants here, especially if it has been introduced from that section of the country through commercial transportation? It would be highly interesting to learn of its occurrence in this State at localities distant from main railroad lines.

BOOK NOTICES.

The Butterflies of the Eastern United States: by G. H. French, A.M.

This book is indicative of the progress made in Zoology, and particularly in Entomology, in that such work is possible, and that it is appreciated. In a plain, simple, and still complete and thorough way, it presents the facts known about a large and distinct group of living objects, which attract the interested attention of every lover and student of nature. The first question which a student asks of a newly found object is, "what is it?" If the object comes within the scope of this volume, this question will be answered easily and satisfactorily. The work has been done carefully and well. The writer has shown his good judgment quite as much in what he has left out, as in what he has put in his book. He has wisely accepted the work which the great body of Entomologists has done before him. He has not felt that a woe rested upon him if he failed to revise, which commonly means to ignore all such work. He has not tried to create a chaos and call it science. He has evidently preferred to present the facts of this subject, rather than to display himself. For what he has done, and for what he has omitted to do, he deserves thanks. The volume is well printed, and its many illustrations, though in many cases familiar, are still the best extant. While we recognize their abundance, we still wish there were more, and hope that it will at some time be possible to figure in such a book every species mentioned. We trust that this work will be followed by others equally meritorious in every division of the wide Entomological field.

Catalogue of Canadian Plants. Part III.; Apetalæ: by John Macoun, M.A., F.L.S., F.R.S.C., Montreal. 1886.

The last publication issued by the Geological and Natural History Survey forms the third part of Professor Macoun's Catalogue of Canadian Plants. Part I., Polypetalæ, and Part II., Gamopetalæ, have already been noticed in these pages. Part III., Apetalæ, carries the work on to the end of the Exogens and completes Volume I.

The value of this important work, which is quite indispensable to every student of Canadian botany, is much enhanced by the Addendum and comprehensive index of the whole volume, contained in the present part. In the former we find corrections and additions to the information recorded under each species in Parts I. and II., so as to bring our knowledge of the whole of the plants mentioned down to date, and in the latter not only are the orders, genera and species given, but every synonym also appears.

By the publication of this work Professor Macoun confers a lasting benefit upon the scientific world. No living botanist has the knowledge of Canadian plants which he has acquired. Possessed of a keen faculty of observation which almost amounts to an instinct, he has had the advantage of travelling extensively and of collecting and studying in their native habitats most of the plants which have been found growing spontaneously in Canada. Moreover, by generously assisting all who apply to him for information, he has secured the hearty co-operation in his work of all the active Botanists in Canada, so that the "Catalogue of Canadian Plants" is not only a record of his own vast experience which extends over a period of more than thirty years of constant study, but also includes the work of all other collectors and Botanists who have investigated or written upon the flora of the Dominion.

So closely are the studies of Botany and Entomology associated together that some knowledge of Botany is actually a necessity to the Entomologist; particularly is this the case in the interesting work of investigating the life-history of insects. It frequently happens that a very slight knowledge of the affinities of a given plant may save from starvation valuable larvæ which have been transmitted to a distance from the place where their proper food plant occurs. Most larvæ will subsist upon plants of the same genus or others closely allied to them.

A good instance of this is presented in the numerous *Colias*, all of which will flourish upon the common white clover (*Trifolium repens*), although in a state of nature they may, according to the species, feed upon plants belonging to a dozen different genera, all of which, however, will be found to be of the same natural order as the clover (*Leguminosæ*). The *Argynnides*, again, will all feed upon our common blue violet (*V. cucullata*), as will the *Pierides* upon common and easily procured cruciferous plants.

On the other hand, for a right understanding of the shapes and positions of flowers, and for a full appreciation of the beautiful methods by which fertilization of the ovules is secured, a knowledge of the structure and habits of insects is of inestimable value.

There is, too, an economic aspect of this case, for if insects will survive upon plants which are only and perhaps distantly allied to their natural food, it is obviously necessary that the cultivator should take this into consideration when engaged in the constant strife which he has to wage against injurious insects, and we even find that some species will actually flourish better upon such cultivated plants, when grown in large numbers; the Colorado potato beetle may be instanced in this connection, which thrives so luxuriantly upon the cultivated potato, but which, when confined to its natural food, the *Solanum rostratum*, eked out but a precarious existence. Otherwise it is useless to abstain from the cultivation of any crop which has been badly attacked, as a means of starving out its insect enemies, in a locality where there are numerous wild plants or weeds which are allied to the plant which it is desired to grow. This must be borne in mind with regard to the many pests affecting cereals which are able to find ample temporary lodgment in the various wild grasses.

OBITUARY.

We deeply regret to announce the death of Mr. William D. Shaw, of Montreal, on the 29th of June, 1886, at the early age of nineteen years. The deceased was well known for his early application to science, he having been the leading spirit in founding the Montreal Chapter of the Agassiz Association. Of this Chapter Mr. Shaw was Secretary and Treasurer, and in 1885 was appointed General Secretary for Canada. Mr. Shaw was also a member of the Council of the Montreal Branch of the Entomological Society of Ontario, a member of the Natural History Society of Montreal, and a member of the Astro-Meteorological Association. A devoted student of science, his loss will be deeply felt by his fellow workers. Unassuming, guileless and upright, his memory will ever be held in loving remembrance by those who had the privilege of knowing him.

INSECTS INFESTING MAPLE TREES.

BY W. HAGUE HARRINGTON, OTTAWA.

Of recent years increasing attention has been paid in Canada to the subject of Forestry, especially in the Province of Ontario. As yet, however, our magnificent forests have not been entirely destroyed, despite the reckless and short-sighted manner in which they have been invaded by lumberman and settler, and the time has hardly come for planting, although it cannot be far distant in some districts. It cannot be wasted labour, nevertheless, to endeavour to find out what is known of the diseases and enemies of each tree, in order that when required the knowledge may be available. For ornamental

purposes many of our trees are already grown, and our citizens are continually paying more attention to the transplanting of shade trees. The streets in our towns and villages are being beautified and shaded by elm, maple, basswood, etc., and it is to be hoped that the habit of setting out trees by property holders will become more universal. The maple is undoubtedly one of the most important of the trees usually selected for shade. It is hardy and vigorous in a large degree, and its various species have each distinctive excellencies. Its fine shapely green leaf is even recognized as the emblem of our nationality. As a shade tree for our cities and towns it is probably unrivalled, its vitality and robust growth making it exceedingly valuable for street planting. In our magnificent forests it is one of the chief trees, and a "sugar bush" is an object of pride and pleasure (as well as profit) to its possessor.

I have thought, therefore, that an enumeration of the insect enemies of the different maples may be of assistance to those who wish to plant or preserve them. Fortunately they are not so badly infested as the oak, hickory, pine, and some other species, although the following list will show that they have quite enough enemies. In the annual report for 1872, Mr. E. Baynes Reed published a paper describing eight injurious species—Nos. 9, 10, 12, 15, 16, 18, 19, 37, of present paper, and notes on these and other species have appeared since from time to time in the reports, and in the *Canadian Entomologist*.

In 1881 the United States Entomological Commission published (Bulletin No. 7) an exceedingly valuable report by Dr. Packard on insects injurious to forest and shape trees. In that report thirty-seven species of insects are enumerated as infesting maples. I am able in the present paper to double this list, and had my time permitted me to do justice to the subject, and more fully examine recent entomological records, it is certain that many more species would have been added.

HYMENOPTERA.

Of insects included in this order (to which belong bees, wasps, ichneumons, saw-flies, etc.) we do not find that many injure the maple, indeed, only one species, the first of my list, is mentioned by Dr. Packard in his Bulletin.

1—(1) *Tremex columba* Linn. This is a large insect which attacks various trees when they commence to decay, or where they have been injured. Maple and beech appear to be specially attacked by it, and particularly old trees of the former species. The female, Fig. 1., measures from an inch and a quarter to an inch and a half in length, and has a cylindrical body, the extremity of which is rounded and terminated by a short tail. The head, thorax, and antennæ are rust-yellow, with black markings; the legs a light ochre-yellow with blackish thighs; the abdomen black, with transverse yellow bands; the wings smoky and expanding about two inches. The male is smaller and has the abdomen flattened, as are also the hind legs. The abdomen of the female is provided with a long slender borer, which is more than half an inch long, and which projects considerably beyond the horny tail which terminates the body. With this borer the insect makes holes in the bark or wood of the tree, in which she deposits her eggs. This boring is a work of much difficulty, and so firmly is the weapon often driven into the wood, that the poor insect cannot withdraw it, and she remains a prisoner until death. The grubs when hatched bore into the tree and feed upon its substance until full-grown. They are cylindrical fleshy worms, with rounded horny heads, and are furnished with very strong jaws, suited for their work of boring through and devouring the wood. The perfect insects emerge from the trees during August, September and October, during which months they may be seen depositing their eggs in the manner described.

Fig. 1.

2. *Xiphydria albicornis*, Harris. In the report for 1883, under the title "A new foe to the maple," I gave a full description of the appearance and habits of this horn-tail, so

that I shall now make but a brief mention of it. It is much smaller than the preceding species, the females only ranging from half an inch to somewhat over three-quarters of an inch in length, while the males are correspondingly smaller. It is black with white markings, and the antennæ are usually white, with the exception of the basal joints, whence the specific name. They appear during June and July, both upon old and young trees, and in this city I have noticed them to especially attack newly transplanted trees. The maple being generally used as a shade tree is planted annually in large numbers, and it is while they are less vigorous from the effects of transplantation that the Xiphydria selects them as suitable for the deposition of her eggs. I have seen trees hardly more than an inch in diameter attacked.

3. *Oryssus terminalis*, Newman. This insect belongs also to the Uroceridæ, but the abdomen is blunt and rounded at the extremity instead of terminating in a horny point. The ovipositor is concealed in the abdomen, instead of projecting therefrom and being protected by sheaths. It is very slender, hair-like, and longer than the insect itself. The insects are about as long as those of Xiphydria, but are much stouter in form. The head and thorax are black ; legs and antennæ black, with markings of white ; abdomen black, or more or less red ; wings clear, with a dusky patch near the tip. Active and restless in their motions, they might easily be mistaken for some species of wood wasps. Their habits have not hitherto, so far as I am aware, been definitely known or recorded, but specimens have been taken by me, both in the act of emerging from the trunk of a dead maple, and in the act of ovipositing therein. They appear in June.

4. *Ibalia maculipennis*, Hald. This curious species belongs to the family Cynipidæ, or gall-forming hymenoptera, and is much larger than any of our other species. It is nearly three-quarters of an inch in length, and the wings expand about an inch. The head and thorax are stout, but the abdomen is compressed laterally until it is very thin, and has the shape almost of a knife-blade. The ovipositor is very long and slender, and when not in use is retracted and coiled up in the abdomen. The insects are rare, and have only recently been recorded (by Provancher) as occurring in Canada. I find both sexes upon old trees in June, and have found the female ovipositing in the bark. The general colour is yellow, with brown spots upon the head and thorax, and with black bands upon the abdomen and the legs. It is possible that the larvæ may be parasitic upon those of one or more of the insects mentioned in this paper.

5. *Megachile optiva* Cress., or a very closely allied bee, (Fig 2 represents a common leaf-cutting bee) sometimes greatly disfigures maples by cutting pieces out of the leaves for the purpose of making its cells. I have seen a small tree nearly defoliated by these bees, of which the habits are most interesting.

Fig. 2.

LEPIDOPTERA.

This order, which consists of butterflies and moths, furnishes a formidable list of species infesting the various varieties of maples. The following species are recorded :—

6. *Ægeria Acerni*, Clem. Of recent years this moth has become generally known as a borer in the maples. It belongs to a genus containing several well-known injurious moths, such as *Æ. Rubi*, the raspberry borer, *Æ. Tipuliformis*, the currant borer, *Æ. Exitiosa*, the peach-tree borer, etc. It was figured and described in Report No. 12 (1881), and was then stated to be increasing in numbers every year, and to be very destructive, especially to young maples. In 1883

(Report No. 14) Professor Saunders also referred to it, in his address as president of the Entomological Society, as prevailing to an alarming extent in the neighbourhood of London, to the serious injury of the shade trees. It has been very destructive also in large portions of the United States, especially in Ohio, Illinois and Missouri. It appears to prefer the red maple, but also infests the sugar maple, and to a smaller extent the other varieties. The moth is wasp-like in appearance; the wings being transparent, while the head is orange, the thorax yellow, and the abdomen bluish-black, banded with golden-yellow. The eggs are laid in crevices of the bark, and in a few days the larvæ emerge, and burrowing inward feed upon the inner layers of the bark and the sapwood. Irregular cavities are thus formed, which are packed with the excrements and morsels of wood. The larva when full grown is about two-thirds of an inch long; white, with a yellow head and reddish legs. It may be readily distinguished from the larvæ of the Uroceridæ, already described, or from those of some beetles which will hereafter be mentioned, by the fact of its having sixteen legs, while the others have either only six, or are footless. When fully grown the larva spins a cocoon, and the moths begin to emerge in June, and may be found during that and the following months. Trees with smooth bark do not seem to be attacked, and those suffer most which have already been the victims of injuries, or of the attacks of other borers. It is therefore recommended to coat the bark with a mixture of soft-soap and a strong solution of washing-soda, made about as thick as paint. This will not, of course, kill the larvæ already at work, but will prevent the laying of eggs. I have found the evidences of the presence of this species in increasing numbers during the past two seasons in Ottawa.

7. *Lithacodes Faciola*, H. S., is a small moth, of which the larva is known as the maple-slug. This slug is of a flattened elliptical shape. The moth is small, and has a light band running across the anterior wings.

8. *Edema Albifrons*, Sm and Abb. This greyish moth expands about an inch across the wings, the anterior of which have a white patch on the costal border. The caterpillars are smooth and striped, with yellow and fine black lines, with head and hump on eleventh segment red. They are sometimes very abundant in the autumn. In 1883 they were especially so in this neighbourhood, and apparently elsewhere. At the annual meeting of the Entomological Society, in October of that year, Mr. E. Baynes Reed reported them as common in London on the maples, and on elms in Toronto and Montreal, while other members reported them common on oak. The moths may be found at rest during the day on the trunks of the trees.

9. *Telea Polyphemus*, Hubner. This is one of our largest moths, the wings expanding about five inches. The caterpillar, Fig. 3, is, when fully grown, about three inches long, and correspondingly stout, of a pale green, with small orange or reddish tubercles on the segments, and oblique whitish lines on the sides of the posterior ones. It is most frequently found upon oak, but feeds also upon maple, and, from the length of its existence in the caterpillar state, its remarkable size, and enormous appetite, it can do much damage. The moth is of a dull ochre-yellow colour, with a clear eye-like spot in each wing, and a dusky band, edged with whitish-red running parallel to the outer margins.

Fig. 3.

10. *Platysamia Cecropia*, Linn. This moth is closely allied to the foregoing, and is still larger. The caterpillar, Fig. 4., in nearly four inches long, and is a remarkable and

Fig. 4.

beautiful example of insect life. The general colour is a pale green, or bluish green, but the body is studded with elevated tubercles of green, blue, yellow, and red colours. When fully grown it spins a large triangular cocoon, from which it emerges as a most beautiful moth, of a size and richness of colour that causes it to appear quite a tropical insect. Its expanded wings measure from five to seven inches across, and are of a rich brown, with beautiful markings of black, red and white. It is known generally to fruit-growers and others, as it feeds on a great variety of trees, and the caterpillars, cocoons, and moths are all such conspicuous objects as to attract the attention of the least observant. It is a well-known feeder upon the apple and other fruit trees, which it attacks more frequently than it does the maple.

11. *Hyperchiria Io*, Fabr., is closely allied to the preceding, but is a much smaller moth, only measuring from two and one-half to three and one-half inches across the expanded wings, the male being much smaller than the female, and darker in colour. The caterpillar, Fig. 5, is much more remarkable than the moth, and when fully grown is more than two inches long. It is of a pale green colour, with a whitish line down the sides, and is set with bunches of spines arising from small tubercles (several on each segment). These spines shown in Fig. 6, much magnified, can inflict very painful wounds, much resembling those from nettles, and sometimes in picking corn or currants one experiences a very unpleasant sensation, if the back of the hand—which, of course, is always very sensitive—should come in contact with a hidden specimen. Hence this larva is known as the "stinging caterpillar," although it has not a genuine sting. It feeds on a great variety of plants, I have not found it myself upon maple, but it has been so found by Dr. Packard (page 111 of Bulletin on Insects Injurious to Forest and Shade Trees).

Fig. 5.

12. *Anisota Rubicunda*, Fabr. The larva of this species is known as the green-striped maple worm, and depredates upon the red and silver maples. In the Western States—Illinois, Missiouri, and Kansas—it is said to prove during certain years very destructive; so much so as to discourage people from planting the above named varieties of maple. In Canada it is by no means so common, but has

been found at times abundant. Prof. Saunders described the larva in the *Canadian Entomologist* for 1870, so that it has been known in Ontario for twenty years. When fully grown it is about one inch and three-quarters long; its colour is yellowish-white, with green stripes. When fully grown they enter the ground and pass the winter there as pupæ; not emerging until the following summer. The perfect insect is a beautiful moth (Fig. 7). The front wings are rose colour, with a pale yellow band; the hinder wings, pale-yellow; thorax, yellow; abdomen and legs, rose-coloured. They fly at night; the wings of the male expand about two inches.

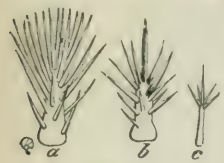


Fig. 6.

13. *Clisiocampa Sylvatica*, Harris. The appearance and habits of the "tent-caterpillar" moths are too well-known to need description. I have no record of them attacking maples in Canada, but they are included in Dr. Packard's list.

Fig. 7.

14. *Hepialus Argenteomaculatus*, Fabr. A moth referred to this species has been bred by Mr. Fletcher from a larva found boring in the base of a spiked maple,—*Acer spicatum*.

15. *Apatele Americana*, Harris, is known as the maple dagger-moth, or maple owlet-moth, and is one of our larger species, expanding about three inches. The fore wings are greyish, with various lines and markings of black and white, and the hind wings somewhat darker in colour. The caterpillar is covered with long yellow hairs, and has pencils of long black hairs; its length is about three inches. It is found feeding in the autumn.

16. *Stegania Pustularia*, Guenee, the lesser maple span-worm, feeds on the leaves in early summer. It has been bred and described by Prof. Saunders. About the middle of June it is fully grown, and produces the moth early in July. The larva is small, not much more than half an inch long; bluish-green, with thickly set longitudinal stripes of whitish and yellowish; skin much wrinkled and folded. When a maple tree is suddenly jarred the caterpillars may be seen suspended underneath it by silken threads, by which they soon regain their feeding place. The moth expands about an inch; is white, with reddish spots on the border of the fore wings.

17. *Eutrapela Transversata*, Packard, is called the large maple span-worm, and the caterpillar feeds upon the red maple in July. It is a rather slender "looper;" that is a caterpillar that progresses by drawing the posterior part of its body up to its front feet, and then carrying these forward until it extends its full length again. It produces a large yellowish moth.

18. *Ohpiusa Bistriatis*, Hubner, the maple semi-looper, or banded maple moth, has been bred and described by Prof. Saunders, who found it late in July upon the silver maple, *Acer dascycarpum*. The caterpillar is nearly one and one-half inches long. The colour is brownish green, with numerous streaks and dots of pale brown. Before pupating it makes a snug little case by cutting a leaf and folding it over and fastening it with silk. The moth expands about one inch and three-quarters; the fore wings are a rich chocolate-brown, and the hind wings a reddish brown, all having destinctive markings.

19. *Incurvaria Acerifoliella* Fitch. This is a very small moth, but its larvæ are capable of greatly disfiguring trees, if not of permanently weakening and injuring them, by the enormous numbers in which they frequently occur. During the past two summers it has been very noticeable in one locality near this city. In 1885 a considerable area, probably five acres, of large trees was entirely defoliated, or rather the entire foliage was so cut and eaten that it had a brown withered appearance, as if the trees had died, or had been scorched. The trunks of all the trees in the neighbourhood, not only of the maples, were covered with the columns of these little case-covered caterpillars, and they were thickly scattered all over the ground. Last season they were equally injurious and covered perhaps twice the area formerly infested. I have seen occasional evidences of the presence of the moth in other localities, but it is only in that mentioned that it appears in such innumerable quantities. The worm is only about a quarter of an inch long, but it injures the leaf not only by feeding upon its tissues; it is a regular tailor and cuts neatly from the leaves oval, or nearly circular, pieces to form a case with which to pretect itself.

These pieces are at first very small, but as the grub grows it cuts out larger blankets for itself, and when it is fully grown, these are about the diameter of its own length. Sheltered by this case the worm feeds upon the softer part of the surface of the leaf, forming upon it rings and irregular patches. When the larvæ are numerous more than one will be found upon each leaf, and the work of destruction proceeds more rapidly. When tired of their location they crawl away, bearing their cases with them, to seek fresh feeding grounds. When blown to the ground with falling leaves they apparently crawl up the nearest trunk again. When mature they drop to the ground, or fall with the leaves, and changing to pupæ in their cases emerge the following spring as pretty little moths, of a dark blue colour, with bright orange yellow heads, which may be frequently seen in early summer upon the leaves or flying from tree to tree. When a serious attack, such as I have described, occurs in a grove, upon shade or ornamental trees, or in a sugar-bush, it would be well to burn over the leaves, and to let pigs or cattle range the ground so as to destroy as many as possible of the pupæ.

20. *Thyridopteryx Ephemeræformis* Haworth. This is a very curious insect known as the "bag-worm," because the larva forms a bag to protect it (Fig. 8*f*) while feeding. The female passes her whole life in this case, being wingless. It is a rather southern insect and will not likely occur in Canada. Among its food plants Mr. Lintner enumerates maple. In Fig. 8, *a* represents the caterpillar; *f*, the same in its bag, fully grown; *b*, the male pupa; *c*, the female moth, legless and wingless; *d*, the male moth; *e*, section of female pupa in the bag, as found in winter.

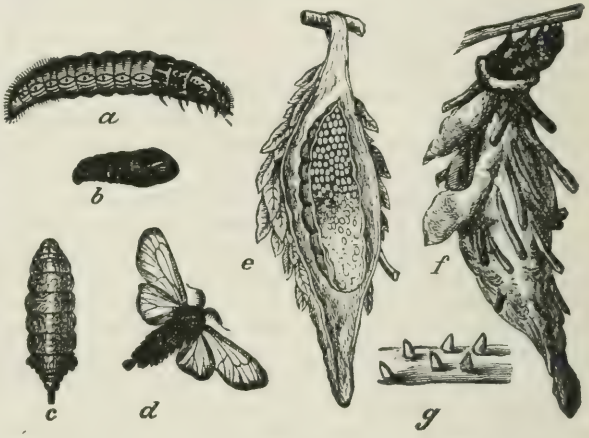


Fig. 8.

The following species are also given by Dr. Packard as infesting the maple:—

21. *Gastropacha Americana* Harris. The American Lappetmoth, which is also sometimes found upon apple and cherry trees.

22. *Nadata Gibbosa* Sm-Abb. Also on oak.

23. *Nematocampa filamentaria*, Guen. I have bred this moth from larva found upon hickory, *Carya amara*. It is described and figured in "Insects Injurious to Fruits," Saunders, as feeding on plum trees. The caterpillar is remarkable as having four long slender fleshy filaments arising from the fifth and sixth segment. It occurs also on oak.

24. *Amphidasys Cognataria*, Guenee. This is a large handsome moth, expanding two inches or more. The caterpillar is a greenish "looper" sometimes attacking currant bushes, and feeding on various plants.

25. *Heterophelps Triguttata* H.-Sch.

26. *Lithocolletis Aceriella*, Clemens. The larva of this little moth mines in the upper surface of the leaves, forming a flat blotch therein.

27. *Lithocolletis Lucidicostella*, Clemens. The larvæ form tentiform mines in under surface of leaves.

28. *Lithocolletis clemensella*, Chamb. The larvæ of this species have the habits of previous one.

29. *Gracilaria Packardella*, Chamb. The caterpillar rolls the leaf downward into a conical figure.

30. *Catastega Aceriella*, Clemens. Of this species only the larvæ were known to Dr. Packard, and although they occur here the moth has never been bred. The larva at first mines the leaf, but subsequently it constructs a case of its frass.

The following species are stated to feed on maples by Dr. Thomas, Entomologist for State of Illinois :—

31. *Agrotis C-nigrum* Linn. Larva known as "Spotted Cut-worm," feeds on grass, vegetables, pear tree and maple.

32. *Eacles Imperialis* Hubner. A very large moth, extremely rare in Canada. Caterpillar about three inches long, with rows of spinous tubercles. Feeds on sycamore, oak, pine, maple, etc.

33. *Hyphantria Textor* Harris. This species is very abundant and obnoxious throughout Canada, being known as the Fall Web-worm, from the fact that the young larvæ live and feed together in a web which they spin upon the branches of the plant upon which they are hatched. The moth itself is a small white miller (Fig. 9, *c*). The larvæ (Fig. 9, *a*) feed on nearly all trees and shrubs.

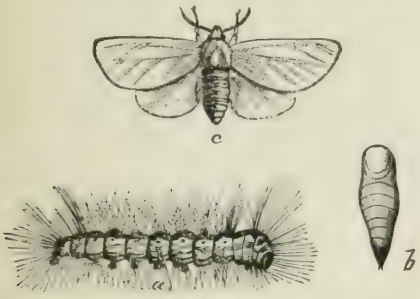


Fig. 9.

34. *Limacodes laticlavia* Clem.

35. *Orgyia leucostigma* Sm.-Abb. A common moth, having a caterpillar (Fig. 12) covered with yellowish hairs ; four brush-like yellowish tufts on back ; two pencils of long black hairs on segment behind head, pointing forward, and another on the posterior end pointing backward. Feeds on a great variety of trees, including oaks, apple, spruce, larch, maple, etc. Fig. 10 represents the male moth ; fig. 11 *a* the wingless female ; *b* a young caterpillar hanging by its silken thread ; *c* and *d* pupæ ; fig. 12, the caterpillar fully grown.

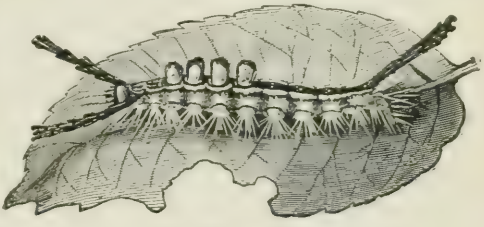


Fig. 12.

DIPTERA.

In this order, that contains the flies, insects distinguished by having only two wings, we do not find many species attacking the maples. Indeed I have no personal knowledge of any, and Dr. Packard only mentions the following species which does not appear in our Canadian lists of Diptera. It belongs to a genus in which we have several well known destructive insects, popularly known as midges, such as the Wheat midge, *C. tritici*, and Clover-seed midge, *C. leguminicola*.

Fig. 10.

36. *Cecidomyia aceris* Shimer, on *Acer dasycarpum*, the silver maple.

COLEOPTERA.

Of beetles we find quite a long list infesting the maple. Ten species belong to the Cerambycidæ, or long-horned beetles, a family containing nearly all the large beetles of which the larvæ are known as "borers," and of which species infest all our trees, although some trees, such as the pine and hickory, are much more infested than are the maples.

37. *Glycobius speciosus*, Say, is universally known as the sugar-maple borer, and has been frequently referred to in our Reports (See Nos. III., VIII., IX., XI. and XII.) The beetle (Fig. 13) appears to be rare in this neighbourhood, but in the

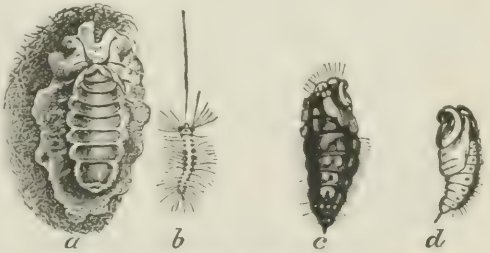


Fig. 11.

western part of the Province it is unfortunately sometimes very destructive. At London it has been accused by Professor Saunders and Mr. Reed of doing great injury to trees throughout the city. The larvæ bore into the solid wood, both of young trees and of large ones, and Dr. Packard cites several cases where healthy, vigorous trees perished from their attacks. The beetle is nearly an inch long, of a rich velvet-black above with bright yellow markings. The head is yellow, the thorax has two yellow transverse lines on each side; the wing-covers have a yellow band across the middle, above which a "W" with oblique bands over it; the tips yellow, with a black dot on each, and band above; legs and under parts of body yellowish. The larva is hatched in July or August, from an egg deposited on, or in, the bark, and burrows at first between the bark and wood, but the following spring, when large, it bores into the solid wood. Like the "apple borer" it should be searched for by the sawdust ejected from the burrow, and be dug out.

Fig. 13.

38. *Calloides nobilis*, Say. This beetle is much rarer than the former, and resembles it in general appearance, except that the yellow markings are not so numerous or extensive. I have captured it on maple trees in June. It is recorded as infesting the chestnut, of which we have none here.

39. *Xylotrechus colonus*, Fabr. A beetle similar in shape to the preceding species, but averaging only about half an inch in length, has been found under the bark of an old sugar-maple (by Mr. G. Hunt). The species bores in the oak also, and I have taken specimens upon hickory. The markings of the elytra are whitish.

40. *Clytanthus ruricola*, Oliv. This is a very pretty beetle, which I find upon several trees, including maples. It is nearly of the same size and shape as the preceding beetle, but is of more elegant appearance, and has longer, slenderer legs. It has the rich black and yellow of the maple-borer, but the head is black; there are no transverse lines on the thorax; and the elytra lack the yellow tips and middle band.

41. *Bellamira scalaris*, Say. This beetle is of a different form, being long and slender, especially the males. I have taken the female ovipositing in a maple stump in July. Her length is over an inch; the head is constructed behind the eyes so as to form a neck; the thorax is narrow; the elytra pretty wide at the shoulders but tapering rapidly to the apex, and shorter than the abdomen. Colour reddish, (sometimes dark), with feet and antennæ more yellowish, the elytra glistening with a fine pubescence. This beetle has been found to attack birch.

42. *Dryobius sexfasciatus*, Say. This a handsome longicorn recorded by Mr. C. G. Siewers of Newport, Ky., as found under bark of dead maple, (Can. Entomologist XII., pg. 139). As it does not appear to be found in Canada I need not give any description of it here.

43. *Orthosoma brunneum*, Forst. This is one of our largest beetles, and its larva is a formidable grub, which may often be found in old pine logs and stumps, and occasionally it occurs in other kinds of wood. I have on two occasions taken the beetles (Fig. 14). under the bark of dead sugar-maples.

Fig. 14.

44. *Urographis fasciatus*, DeGeer. Is a grayish beetle, with several wavy black bands. It is slightly over half an inch long, and the abdomen of the female is prolonged into an ovipositor that protrudes beyond the wing covers. It infests also the oak and hickory.

45. *Liopus variegatus*, Hald. This is a smaller beetle which I have once or twice captured crawling on the trunks of old sugar maples.

46. *Saperda tridentata*, Oliv., is the elm-tree borer, which often does great injury to elms. It belongs to a genus which contains several of our best known borers, among others the apple-tree borer (*S. candida*) the linden borer (*S. vestita*), the poplar borer (*S. calcarata*) and the hickory borer (*S. discoidea*), I have

not seen any mention of it attacking the maple, but I have bred specimens of the beetle from pupæ taken under the bark of a fallen sugar-maple. These pupæ were found in May, and the beetles appeared on 15th June. The larva is a flattened white grub, about half an inch long, mining between the wood and bark, and loosening the latter, to the injury of the trees infested. The beetle has a lateral red line bordering the thorax and elytra, giving off three tooth-like projections on each elytron, whence the specific name.

The Lucanidæ are beetles whose larvæ live in decomposing wood, subsisting on the juices thereof, like those of several of our largest Scarabæbidæ. Such habits are rather beneficial than otherwise, as the reduction of fallen timber is thereby hastened, but in some cases injury may be done to living trees by the enlargement of accidental crevices and cavities. Injury may, however be done by the beetles themselves as they sometimes attack foliage.

47. *Platycerus quercus*, Weber. On 6th May 1881 I noticed young maples evidently attacked by some insect, as many of the leaf buds, then almost ready to open, were partly withered and destroyed. On examination I found within several of the buds beetles, then new to me, which proved to be the species under consideration. The beetle had first gnawed a hole into the centre of the bud, and then in concealment had feasted on the tender substance of the young leaves. In one instance a pair of beetles (male and female) were found in the same cavity. I have since found the beetles upon the leaves of various trees, and the larvæ in old logs and stumps of elm, etc. The beetle is a little less than half an inch long; flattened and black with sometimes a greenish hue; the antennæ have the terminal joints lamellate, and the mandibles in the male are prolonged like a pair of pincers, those of the female are shorter and she is reddish underneath.

48. *Dorcus parallelus*, Say is a much larger beetle, being an inch long. The male has head, thorax and abdomen all of equal width, (whence the specific name) but in the female the thorax is more round in front and the head smaller. The jaws of the male are large and toothed, those of the other sex small. The beetles are found under the loose bark of old sugar-maples, the larvæ living in the decaying parts of the trees.

49. *Ptilinus ruficornis*, Say. Family Ptinidæ. This is a little brownish beetle not more than one-fifth of an inch long, and having the head almost hidden by the thorax. The male is much smaller and has pretty reddish pectinate antennæ. The beetles are very common and attack various trees, both living and dead. When a tree—say oak, hickory or maple—has been injured by blazing or peeling of bark, this little beetle may frequently be seen boring into the exposed wood; or if the injury is an old one perhaps numbers may be found emerging. I have seen great numbers issuing from maple trees, leaving the wood riddled with small holes.

50. *Xestobium affine*, Lec., belonging to the same family is recorded by Dr. Packard as found in a stump of red maple. I do not know whether it occurs in Canada or not.

Fig. 15.

51. *Chrysobothris femorater*, Lec; family Buprestidæ, is well known as the flat-headed apple-tree borer, (Fig. 15), which has been described and figured so often in our reports. In the Western States this beetle is said to very seriously injure soft maples. I have not observed it to attack our maples here, but have found it to infest hickories.

52. *Dicerca divaricata*, Say., belongs to the same family and is larger. It greatly infests old, and particularly dead maples, and I have frequently seen the females depositing eggs in such trees. On a bright sunny day in mid-summer an examination of any dead maple or beech will probably show one—perhaps many—of these beetles crawling lazily up and down the trunk or sunning themselves thereon. This species is readily distinguished from others of the same family (all hard beetles with bronzy or other metallic lustres) by the prolonged tips of the elytra diverging.

53. *Dicerca lugubris*, Lec. The only specimen of this beetle which I have taken, was on a shade maple. It is a blackish beetle about the size of the apple-tree chrysobothris.

54. *Stenoscelis brevis*, Boh., is a small blackish beetle found boring in poplar and maple, but does not probably do much injury. It belongs to the family Calandridæ.

55. ***Eupsalis minuta***, Drury, is a peculiar long-snouted beetle belonging to the family Brenthidæ, of which it is the sole Canadian representative. Fig. 16 shows the insect in its different stages. It has a cylindrical body ; thorax egg-shaped and tapering gradually to the head, which is prolonged in a straight snout, hardly as long as thorax ; beak of female slender with very small jaws, that of male heavier with strong curved jaws. Smooth and glossy ; brown, with broken yellow lines on wing-covers. Size extremely variable, from one quarter to seven-eighths of an inch. The larvæ of this beetle bore in various kinds of oaks, usually in felled trees or stumps, burrowing, it is stated, in all directions through the heart wood. On 22nd May, 1882, I obtained about twenty beetles from under the bark of a large fallen sugar-maple. The larvæ had apparently lived chiefly on the inner layers of the bark and on the sap wood. On another occasion I found specimens emerging from a maple stump.

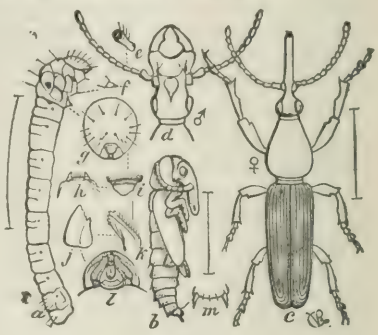


Fig. 16.

The following beetles are also found upon maples, but cannot do much injury, except, perhaps, the last two, should they become very abundant.

56. *Cucujus clavipes*—Fab. A brilliant, flat, pinkish beetle, found with its larvæ, also flat, under bark of various dead trees, especially birch and elm, occasionally of maple.

57. *Alaus oculatus*, Linn. Larva, inhabits decaying wood of various trees. Fig. 17 represents the well-known beetle.

58. *Corymbites sulcicollis*, Say. Beetles found in crevices of bark or under loose portions of large sugar maples ; rare.

59. *Nyctobates pensylvanica*, De Geer.

60. *Ipthimus opacus*, Lec.

61. *Upis Ceramboides*, Linn. These three species are large, somewhat flattened, black beetles, often found under loose bark of old trees. The larvæ live in decaying wood of various kinds.

Fig. 17.

62. *Enchodes sericea*, Hald. Beetles found in old maple logs. Several other species of the same family—Melandryidæ, also occur on old trees, probably to feed on fungous growths.

63. *Tomoxia bidentata*, Say. Mordellidæ. I have always found these beetles on old maples or maple stumps.

64. *Pyrochroa femoralis*, Sec. Beetle under bark of dead trees.

65. *Corthylus punctatissimus*, Zimm. Scolytidæ. Stated in classification of the Coleoptera of North America to depredate on maple trees. It is nearly allied to *Monarthrum mali* (Fitch), a minute beetle which attacks apple trees.

66. *Xyloterus politus*, Say. Belongs to same family, and has been reported by M. Lintner attacking maples.

Hemiptera.

The insects contained in this order are popularly known as bugs. They have a slender jointed proboscis with which they suck the juices either of plants or animals. The species are numerous, varying in size from the Aphides—tiny "lice" feeding upon plants —to the great Belostoma, a rapacious water-bug, preying even upon small fish. Although some kinds of trees are attacked by many species of bugs, the maples seem to be more favored, and to have but few hemipterous depredators. I have only found the following species recorded :—

67. *Pulvinaria innumerabilis*, Rathvon. This is a species of scale-insect or bark-louse, which of recent years has been found badly infesting maple trees in many portions

of Ontario. In the *Entomologist* for August, 1884 (vol. XVI., page 141), may be found a full account of it by Prof. Saunders, who suggests that it might with great propriety be designated the maple tree bark-louse instead of, as it is commonly called, the grape vine bark-louse. It was first described in 1884 by Dr. Rathvon, of Lancaster, Pa., who observed it for several years on basswood, and who gave it the name *innumerabilis* on account of its immense numbers. The lice appear in the form of brown scales; those of the females having waxy filaments projecting from them. The eggs are laid among these filaments, and are very numerous—from 500 to 2,000—the female commencing to lay in the latter part of May, and continuing for several weeks until she dies. The young lice when hatched are yellowish white, and can move freely about. They soon spread all over the branches, and seek the twigs and places where the bark is tender. Selecting suitable spots, they insert their beaks and commence to devour the sap, gradually assuming the scale-like form and becoming incapable of further change of habit or position. When fully grown the male emerges from his scale and appears as a delicate, minute two-winged fly, but the females always retains her degraded form.

68. *Lygus monarchus*, Uhler. This bug has only recently been described (Can. *Ent.*, Vol. XVIII., page 208) by Mr. Uhler, who states that it is a very common insect in some localities, and has been taken by him on maples, alders, and many other trees and shrubs. He has found it near Quebec, and it seems to have a wide distribution in the United States.

69. *Capsus goniphorus* (Say.) is a brilliant red or scarlet bug, found not unfrequently on various trees, including maples. Mr. Fletcher informs me that it is nocturnal in its habits.

70. *Ceresa bubalus* (Fab.) is one of the tree-hoppers, its popular name being the Buffalo tree-hopper. It is found upon a great many species of trees, and like all these insects lives upon sap drawn from the tree by means of its proboscis.

Dr. Pachard mentions also the following:

71. *Psylla annulata*, Fitch. On sugar maples.

72. *Aphis aceris*, Linn. On *acer pensylanica.*

73. *Lecanium acericola*, Walsh and Riley.

74. *Lecanium acericorticis*, Fitch. On silver maple.

INSECTS TROUBLESOME IN THE HOUSEHOLD AND HOW TO DEAL WITH THEM.

BY THE REV. THOMAS W. FYLES, SOUTH QUEBEC.

Certain insects are so troublesome within doors that they may well be denominated "Household Pests." Many of the species are easily recognized by the most careless observers; and yet their life-histories are to many persons altogether unknown, as are also the right methods to abate the annoyances they occasion.

It shall be my effort to give, in this paper, a brief account of the most troublesome of these insect offenders and to point out some of the remedies that may be used against them.

I shall tell of some insects affecting (1) Personal Comfort, (2) Food, and (3) House Plants.

I.—Insects Affecting Personal Comfort.

1. The House Fly (*Musca domestica*) belongs to the family *Muscidæ*, in the order *Diptera.* The beautifully reticulated eggs of the insect are laid by the parent fly in horse-manure. They hatch in twenty-four hours, and a week suffices to bring the maggots to their full growth. In turning over the manure pile, in the summer months, the farmer will find them in abundance, as he will also the pupæ, which, in form and size, resemble grain,

but in colour are a reddish brown. The perfect fly bursts from the pupa-case in six or seven days. Seen under the microscope it is a remarkable and beautiful object. Its eyes are compound, each presenting four thousand facets. Its wings are beautifully hyaline, flashing in the light rich tints of purple and crimson. The labium, or tongue, terminates in a sucking disk, divided into two leaves, which are ribbed underneath like a rasp (Fig. 18). It is the friction of these ribs which leaves the sensation of a bite upon the skin, when the insect has tried its powers upon us.

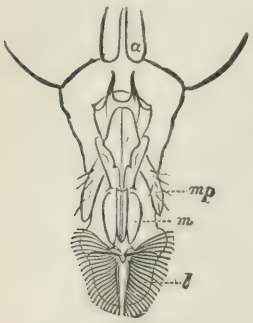


Fig. 18.

Insects belonging to the genus *Musca* are very prolific. Leeuwenhock calculated that in three months, the natural and unchecked increase from one pair of flies would be 700,000. Vast numbers of the maggots of the house-fly are eaten by domestic poultry, and vast numbers of the perfect insects by hornets and wasps. The fly, moreover, is subject to a strange disease, in which the abdomen becomes distended and a fluffy substance appears in the joints. The fungus is *Sporendonema muscæ*. It spreads through the system, saps the life and the fly succumbs.

Much may be done to keep down the numbers of the house-fly. The horse-barn should be placed at a distance from the dwelling house. The manure pile should be frequently turned, and the poultry allowed free access to it. The house should be supplied with doors and blinds of gauze-wire or netting, which will admit light and air, so necessary to the health of the inmates, and shut out flies and other intruders. Care should be taken to destroy every fly that shows itself in the winter—hibernating insects will start fresh colonies in the spring. A simple and very effective fly-trap may be made thus :—Fill a tumbler to within an inch of the top with strong soap-suds. Take a slice of bread, cut in the centre of it a hole about an inch in diameter; moisten the under surface; spread it freely with Muscovado sugar; place it with the sugared surface downward, over the tumbler, so that the hole may come in the centre. The flies will soon discover the sugar, descend through the hole, and very soon attempting to fly, will be engulfed. When the flies blacken the suds they can be taken out and thrown into the stove.

Fig. 19.

Fig. 20.

2. The Mosquito (*Culex* ———) belongs to the family *Culicidæ* in the order *Diptera*. Several species of the genus *Culex* are assigned to British North America. The names of these different species are suggestive,—*excrutians*, *impatiens*, *implacabilis*, *provocans*, *stimulans*, etc. The mosquito lays her eggs in a boat-shaped mass on the surface of the water. She delights in pools, for her progeny feed upon the decaying matter which abounds in stagnant water. They are familiarly known as " wrigglers." They are often seen in rain-water which has been allowed to remain too long in the butt. The breathing apparatus of the larva is situated at the extremity of the body, and is described by Packard as a " star-like respiratory tube which connects with the tracheæ." The creature is often seen hanging with its head downwards and its respiratory organ at the surface of

the water. Its large head and thorax act as a weight to keep it in position. The pupa or nymph is active also and moves with a succession of jerks, and by means of two swimming leaves, or paddles, placed at the end of the abdomen. One month suffices to carry the mosquito through its preliminary stages. The pupa rises to the surface; the skin divides, and the perfect insect steps out, using the empty case as a raft until its wings, having been shaken out and dried, are in a condition for flight.

It is the female mosquito only that attacks us. Fig. 19 represents the female, magnified; and Fig. 20 the mouth parts much enlarged. The weapon she uses consists of a number of lancets, which, compressed in the wound they make, form a tube through which the blood is drawn. The shrill warning of its approach which the creature gives is caused by the rapid vibration of its wings.

The mosquito, however troublesome, is doubtless a beneficial insect. Its larvæ consume decaying matter which would generate miasma and the perfect insects do their best to drive men from unhealthy localities. As a tract of country is made fit by thorough drainage, for human habitation, they disappear. *Drainage* is the great remedy against them. Wire doors and blinds will keep them out of the house, and the application of a little salt and water will allay the irritation of the wounds they give. As a preventive against their bite [and against those of the Black Fly, (*Simulium molestum* which is found in Company with them] woodmen and tourists make use of pennyroyal, oil of tar and carbolic ointments.

3. The Bed Bug, (*Acanthia lectularia*) belongs to the family *Membranacei* in the order *Hemiptera*. This disgusting creature finds its way, unexpectedly, to new quarters. It is sometimes brought in the clothing after a journey. It is sometimes introduced in parcels and in second hand books, etc. It is well to know its history, and how to deal with it. When I was a boy it was known in the "Home Counties" as the "London Bug"; and housekeepers in those parts examined suspiciously all packages from London. Southall, who wrote 150 years ago, tells us that the creature was brought over from America in timber for the re-building of the city after the great fire of 1666. We learn from other sources that the bug was not known in Europe previous to that event. This may well have been, for trade with America had been carried on for many years before the fire occurred. But, probably, the main colony was introduced in the way that Southall says. The name bug is an old word signifying *a terror*. Psalm xci, 5, in the early versions of the Scriptures reads "Thou shall not be afraid of any bugge by night."

The female bed-bug lays her eggs, about fifty in number, in crevices. They are oval, small and white, and are protected by a coating of varnish. They hatch in about three weeks, and in three months the young attain their full size. There are four broods in a year. The full grown bug is two-and-a half lines in length, rust-red in colour, flat and wingless. Its abdomen is disproportionately large. Its antennæ are four-jointed and its beak has a three-jointed labium, or sheath.

To keep the house clear of this pest extreme cleanliness is necessary. The walls of bed-rooms should be lime-washed or painted—*not papered*. Iron bedsteads are preferable to wooden ones. The joints of wooden bedsteads should be washed with a solution of *bi-chloride of Mercury*. It can be applied with a paint-brush or a feather. The floors should be often washed with scalding water. To eradicate bugs when they have well established themselves, rooms should be well fumigated with brimstone. The *modus operandi* is thus given by Dr. Lintner, State Entomologist of New York, in his Second Annual Report, page 18:—"Place in the centre of the room a dish containing about four ounces of brimstone, within a large vessel, so that the possible overflowing of the burning mass may not injure the carpet or set fire to the floor. After removing from the room all such metallic surfaces as might be affected by the fumes, close every aperture, even the key-holes, and set fire to the brimstone. When four or five hours have elapsed the room may be entered and the windows opened for a thorough airing."

4. The Louse (*Pediculus humani capitis*) belongs to the family *Pediculina*, in the order *Hemiptera*. This insect is quite as disgusting and unwelcome as the last described. Yet, despite the care of fond mothers and careful nurses, it does occasionally find its way

to the heads of children, especially of such as are wont to make chance acquaintances. The insect itself is of a venturesome disposition, as Burns has sung :—

"Ye ugly, creepin' blastit wonner,
Detested, shunn'd by saunt and sinner,
How dare you set your fit upon her,
Sae fine a leddy!
Gae somewhere else and seek your dinner
On some poor body."

* * * * *

"Now haud you there, ye're out o' sight,
Below the fatt'rils, snug and tight;
Na, faith ye yet! ye'll no be right
Till ye've got on it,
The vera topmost, tow'ring height,
O' Miss's bonnet!"

Perhaps Burns regarded the louse too unfavourably. There is reason to believe that the insect has brought distinction to at least one noble family. Quartered, 2nd and 3rd, in the arms of the Earl of Lathom are those of Bootle :—

"Gules on a chevron, engrailed, between three *combs* argent, as many crosses patée, fitchée of the field."

The combs are represented as veritable "small tooth-combs." Under what circumstances the distinction was granted I know not. It may be that in former days some lady of the Bootle line proved herself particularly useful in the royal nursery; or that the suzerain observed, on some noteworthy occasion, that each retainer brought into the field by the head of that family, was, *with his familiars*, truly *a host*; or that in the days when hair-shirts were seldom changed, and St. Jerome's advice to Rustique, "Never flatter the body by the use of the bath," was held in high esteem, some particularly saintly Bootle—perchance on his return from pilgrimage—was honoured by his king in having allotted to him the suggestive combs and crosses, "*ut reg.*" as Debrett has it. However the case may be, we have here an instance of a noble family attaching importance to its "small tooth combs"; and we learn from it that things aristocratic and things vulgar are sometimes brought into juxta-position.

Leeuwenhock has told us that the increase from one female louse may in eight weeks number five thousand. No wonder that the lodgement of a creature so fecund is dreaded. The eggs or "nits" of the louse hatch in eight days; and the young attain their growth in less than a month. The insect is wingless. Its abdomen is large and has nine segments. Each of six legs terminates with a hook. Its antennæ are filiform and five-jointed. It has a retractile beak or sucker. Its eyes are not faceted.

A comb smeared with white precipitate ointment and run through the child's hair will soon dispose of this obnoxious pest.

5. The Flea (*Pulex irritans*) belongs to the family *Pulicidæ* in the order *Diptera*.

The eggs of the flea, which are oval and one forty-fifth of an inch in length, are laid in hearth rugs, etc., or in the fur of animals, from which they are shaken to the floor or ground. The larvæ live in the dust and dirt, and feed on decaying vegetable substances. They are footless, long, and somewhat hairy; and, at the end, they have two long spines. In colour, the head is honey-yellow, the rest of the body, white. The antennæ are three-jointed. These larvæ attain their growth in twelve days, and then form a silken cocoon in which they undergo the pupal change. The insect remains in pupa about two weeks. In the perfect flea, the body is compressed, the wings are represented by minute scales on the thorax; the beak or rostrum is formed both for laceration and suction; the eyes are simple; the skin is polished and horny, and set with sharp bristles pointing backwards; the long, hindmost pair of legs are formed for leaping. A flea can leap thirty times its own height.

Dogs and cats troubled with fleas should be frequently washed with strong soap-suds. To banish fleas from the house old Tusser's remedy (quoted by Kirby and Spence) may be tried :—

"While wormwood hath seed get a handful or twain
To save against March, to make flea to refraine,
Where chamber is sweeped and wormwood is strown,
No flea for his life dare abide to be known."

II.—Insects Affecting Food.

6. The Grain Moth (*Tinea granella*) belongs to the family *Tineidæ* in the order *Lepidoptera*. In its perfect state this insect is about one-third of an inch long. It has glossy fore wings marbled with grey and brown, and spotted with dark spots. Its hind wings are blackish. There are two broods in the year. The first appears in May, and the second in August. The young from the latter live through the winter.

The caterpillars, as soon as they are hatched commence to eat the grain, and to spin a web, mingling with it rejected fragments of their food, and, as they increase in size, the grain itself. Where the creatures abound the whole surface of the grain in the bin will be found tangled into a crust of webs and damaged grain. The caterpillars, that do the mischief, are yellow or buff in colour, and have reddish heads. When full grown they are half-an-inch long. They creep into some nook or crevice to spin their cocoons which are about the size of a kernel of wheat. The chrysalis is brown and shining.

To remedy, in a measure, the effects of the creature's operations, the grain should be passed through a fan. To prevent attacks it should be kept in barrels, headed up, or in small tight bins, in cool and dry apartments.

7. The Meal Worm (*Tenebrio molitor*). This grub is the larva of a beetle belonging to the family *Tenebrionidæ* in the order *Coleoptera*. The beetle is very common, and is sometimes called the "black beetle," and sometimes the "flour beetle."

The larva is about an inch long. It is cream coloured and has twelve clearly marked segments, besides the head. It is smooth and glossy. It abounds in corn-mills, flour-stores, bakeries, etc. It often does much damage on ship-board, biting its way through and through the biscuits stored in casks. It is sought for by bird-fanciers as food for their pets.

The perfect insect is of a compact ovate form. Its colour on its first appearance is chestnut brown, but exposure darkens this rapidly into blackish brown. The elytra cover the abdomen and are striated. The legs and antennæ are long and slender.

To keep the store-room free from the worms, *kill the beetles.*

Fig. 21.

Fig. 22.

8. The Flesh Fly (*Sarcophaga carnaria*) belongs to the family *Muscidæ* in the order *Diptera*. Fig. 21. It is black, striped and checkered with grey. Its legs are stout and hairy. Its head is rather small. It is viviparous—it deposits living maggots, the eggs hatching within its own body. It is marvellously prolific, producing as many as 20,000 larvæ, Fig.

22. The voracity of these is so great, and their growth so rapid, that it is said they will increase two hundred times in weight in twenty-four hours. Linnæus asserted that three female flies and their immediate progeny would devour a horse more quickly than would a lion.

The well-known Blow Fly, or Blue Bottle (*Musca vomitoria*), in the same family and order, unlike the flesh fly, lays eggs.

The larvæ of both the above-named flies are pointed at the head and truncated at the tail. They are used by anglers, and are called gentles.

To preserve meat from fly-blows, keep it in ice-houses, refrigerators, or wire safes.

9. The Bacon Beetle (*Dermestes lardarius*) belongs to the family *Dermestidæ* in the order *Coleoptera*. This insect is well known, and is much dreaded by Entomologists on account of the destruction it works among their dried specimens. The creature lays its eggs upon stuffed birds, skins, hams, dried meat, etc. The hairy larva is whitish brown above, and white beneath. Its body is elongated and tapers towards the tail, which ends in two spines. The cast skins of the larvæ are often the tokens of its presence. The perfect beetle is about a quarter of an inch long. Its colour is dull black, relieved by a broad greyish band across the base of the elytra. This band is a growth of thick grey down, and the spots that are found in it are places where the down is wanting. The insect is oblong and compact. Its elytra cover the abdomen. The antennæ are clavated.

The use of benzine will save the stuffed birds; and care and cleanliness will banish the beetles from the larder.

10. The Cheese Fly (*Piophila casei*) belongs to the family *Muscidæ* in the order *Diptera*. The larvæ of this insect are the well-known "hoppers" found in cheese. They are whitish in colour; and in shape they are tapering—pointed at the head and truncated behind. The head is furnished with mouth-hooks, by means of which the creature draws itself along. It has the power of leaping four or five inches. To accomplish the feat, it brings its head and tail together, grappling the edge of the latter with the hooks at the mouth, and then, suddenly quitting its hold, it is jerked by the rebound to the distance named.

The perfect insect is a shining black fly, three-twentieths of an inch in length. Its wings are transparent, and its hindmost and middle legs are yellow.

To preserve cheese from the fly, keep it in a closely covered earthen jar.

III.—Insects Affecting House Plants.

11. The Scale Insect (*Lecanium hesperidum*). Oleanders, rose-bushes, abutilons, etc., are often infested with this creature which belongs to the family *Coccidæ* in the order *Hemiptera*. The scale is convex, smooth and shining. It is dark brown in colour and of an oval shape. The short legs and thread-like antennæ are hidden by the shell. The insects are found lying longitudinally, with the head upwards, on the stems and branches. The damage they do is caused by suction—the creatures insert their beaks and imbibe the sap, and so doing weaken the plants. The young larvæ are of a yellowish colour.

The presence of the scale insect betokens too dry an atmosphere.

Wash the affected plants with a mixture of kerosene oil, milk and water, in equal parts. It can be applied with a rag or sponge.

12. The Mealy Bug (*Dactylopius adonidum*). This also belongs to the *Coccidæ*. It is universally distributed. When full grown it is one-eighth of an inch in length. It is of an oblong shape flattened at the head. It has two long spines at the end of the body, and other spines along the side. It is covered with a white mealy substance. The male is a winged insect.

Whiskey applied with a brush will kill the bugs.

13. The Red Spider (*Tetranychus telarius*). This pest is a mite belonging to the family *Trombidiinæ*, in the order *Aptera* or wingless insects. The creature is very minute and can hardly be distinguished by the unassisted eye. It varies in colour from green to brick-red. Like other mites it has eight legs. It works on the under side of the rose-leaf, lacerating it with its jaws and draining its juices by means of its beak or sucker. It

spins a fine web as a protection to itself and its young. The leaves attacked by it turn yellow and drop off; and, unless the pest is overcome, the plant will soon be entirely denuded.

For a remedy, dust the under sides of the leaves with flour of brimstone. Exposing the affected plant to a good shower is beneficial.

14. The Thrips (*Erythroneura rosæ*) belongs to the family *Cercopidæ* in the order *Hemiptera*. It is almost as injurious to the rose-bush as the red spider. The perfect insect is a little more than a tenth of an inch long, and has a yellowish body, and white transparent wings. Its eyes are brown. The female lays her eggs in June. The empty pupa-skins of the species are often very conspicuous on the under side of the leaves. Affected plants should be well showered with an infusion of tobacco.

Fig. 23.

15. The Plant Louse (*Aphis rosæ*) Fig. 23, belongs to the family *Aphidæ* in the order *Hemiptera*. The winged males and females of the species appear in the fall. The insect is green, flask-shaped—the abdomen being large and round. The wings are transparent, much longer than the body, and have a few veins which extend outward from the costa. The upper wings are nearly twice as large as the lower. The head of the insect is small. It is furnished with tapering antennæ and with a long tubular beak. The eyes are globular. The legs are long and the feet two-jointed. At the upper side of the body, near the extremity, are two little tubes or pores, which exude, in droplets, a honey-sweet fluid.

The female aphis, having outlived her mate, lays her eggs and dies. The eggs hatch in early spring, and produce wingless females. These are viviparous, and bring forth, in each case, about ninety young ones resembling themselves. The new brood rapidly attain their growth, and produce other wingless females; and so the ever-increasing multitudes are generated until, in the final autumnal brood, winged males and females again appear. Réaumur calculated that the descendants of one female would, unchecked, amount, in five generations, to five thousand nine hundred and four millions nine hundred thousand.

The sweet fluid exuded from the abdominal tubes of the aphis is known as "honey-dew." It is this fluid which attracts ants, and is the cause of their diligent attendance upon the creatures that produce it.

To destroy the aphis, sprinkle the plants affected with tobacco water, or wash them with suds made with carbolic soap.

The writer of the preceding notes on troublesome insects has drawn largely upon information supplied in valuable papers which have appeared from time to time in the publications of the Entomological Society.

MIMETIC ANALOGY.

BY THE REV. THOMAS W. FYLES, SOUTH QUEBEC.

Insects have numerous enemies, and it is interesting to notice the provisions made for their preservation from them. One of the most remarkable of such provisions is the likeness which they, in many cases, bear to objects among which they are placed, or to living creatures with which they consort—creatures less likely to be molested than they. This resemblance is called Mimetic Analogy.

The caterpillars of *Geometra papilionaria*, which feed upon the birch, closely resemble, in colour, size, and general appearance, the catkins of that tree. They attain their growth as the catkins attain theirs. The caterpillar of *Amphidasis betularia* is the exact counterpart of an oak twig. The brown bifid head of the larva resembling two unopened buds of the plant. One insect (*Phyllia foliata*) would be mistaken for a bunch of green leaves, and another (*Gastropacha quercifolia*) for a bunch of dry ones. Dr.

Hartwig, in his fascinating work on the Tropical World, thus tells of a leaf-like butterfly :—

"Mr. Wallace describes the *Kallima paralekta*, a large, beautifully coloured butterfly when flying, but which, when alighted, cannot be distinguished from a dead leaf, except upon the closest scrutiny. He had often seen it flying, but had never been able to capture one. At last he actually saw one alight close by where he was standing, but it disappeared as if by magic. At last he detected it, and having secured it, was able to perceive how it was able to hide itself, when in plain view. The upper end of the wings terminates in a fine point, while the lower wings are lengthened out into a short thick tail; between these points runs a dark line like the midrib of a leaf, with marks on each side resembling leaf-veins. When the wings are closely pressed together, the whole outline is exactly like that of a half-shrivelled leaf, which it then resembles in colour. The tail of the hind wings forms a perfect stalk, and rests upon the twig, while the insect is supported by the middle pair of legs, which are hardly to be distinguished from the twigs around. The head is drawn back between the wings, at whose base is a notch to let it in. Knowing all this, one must look closely at the picture which he gives in order to distinguish the alighted butterfly from a leaf."

Fig. 24.

Many insects hide their glories under sober coloured fore wings. This is especially the case with the *Catocalidæ*. An insect of this race, in repose, resembles a piece of bark, or of lichen; but, when displayed, its beauty is marvellous. I remember a hunt I had, many years ago, for a specimen of *Catocala relicta*, (Fig. 24) in the sugar-bush, near the farm-house, over the brow of Mount Royal. The insect was at rest on the trunk of a tree, just above my reach. It was disturbed by my efforts to secure it, and flew off. I watched it threading its way amongst the maples for some moments; and then it disappeared. I proceeded in the direction it had taken, and, after half an hour's search, discovered it again. Again it escaped me. It was too good a prize to be lightly abandoned, so I once more set out in pursuit, and I went

——— across the bush,
And through and through the bush
And round and round the bush,

and, after three hours' search, I found it, and had the satisfaction of boxing it.

Who has not been startled, when walking along a dusty roadway in the fall to see the Rattling Locust (*Œdipoda sulphurea*), which perhaps he had mistaken for a piece of dirt, suddenly spring up at his feet, spread its handsome sulphur-coloured and black under-wings, and fly off with a series of snaps which sounds like an explosion of derisive laughter?

But the most interesting instances of Mimetic Analogy, are those wherein one species of animated creatures bears a resemblance to another with which it consorts. When the apple-trees are in blossom, great numbers of large humble bees, noisy, fierce, well armed fellows, which neither boy nor bird would have the hardihood to molest, may be seen hovering over the blossoms. But, mingled with them, and closely resembling them in size, colour and mode of flight, will be found the yellow-belted moth, *Amphion nessus*, and the "Clear wings," *Macroglossa pelasgus* and *Macroglossa diffinis*. A fear of the bees secures the moths, just as, in the east, a wholesome dread of the military escort saves the peaceful traveller from the Bedouins.

In South America, there are certain butterflies which have an offensive odour—so bad an odour that the birds and the dragon-flies will not honour them with their attention.

With them are others of different genera, and quite inoffensive, but so closely resembling the ill-smelling ones in general appearance that it requires a trained eye to distinguish between the kinds.

The theory of Natural Selection is, that nature in the weaker creatures is straining after a resemblance to the stronger. But, oh, do not think that perfection would be reached when the weaker butterfly, *Leptalis orise*, became as ill-savoured as its associate, *Methona psidii* and *Macroglossa pelasgus*, could sting as sharply as *Bombus terricola*, and other fancied improvements in insect economy had been made; for while these changes were taking place the birds and the dragon-flies would often, it will be perceived, have to go supperless to bed, and they too, to use the words of Mrs. Chick, would find it necessary to "make an effort," and would rise superior to their sense of smell; and then there would be a general disarrangement of aims; so that, after all, we cannot wonder that untold centuries, as believers in Darwinism tell us, were necessary to change the monad into the man.

"Not one or two ages sufficed for the feat,
It required a few millions the change to complete;
But now the thing's done and it looks rather neat,
Which nobody can deny."

This theory of Natural Selection runs counter to certain long-received statements, among which is this: "*He* hath made everything beautiful in its season; there can nothing be added to it, and nothing taken away from it."

Southey, in one of his poems has shewn us that we could make no improvement even upon the pig—that alterations would but mar its pig-perfection:—

"Jacob! I do not like to see thy nose
Turn'd up in scornful curve at yonder pig,
It would be well, my friend, if we, like him,
Were perfect in our kind! * * *
* * * Give thy fancy scope,
And thou will find that no imagined change
Can beautify the beast. Place at his end
The starry glories of the Peacock's pride,
Give him the Swan's white breast; for his horn hoofs
Shape such a foot and ankle as the waves
Crowded in eager rivalry to kiss,
When Venus, from the enamor'd sea arose;
Jacob, thou canst but make a monster of him!
All alteration man could think would mar
His pig-perfection."

And a class of students once tried their hands at insect manufacture, but were not eminently successful. They took the thorax of one species, the head of another, the abdomen of a third, the legs of a fourth, the wings of a fifth, and the antennæ of a sixth; and by the aid of mucilage, and with careful manipulation, they succeeded in setting up a very extraordinary object. An innocent-looking individual of their number was chosen to be spokesman; and they presented themselves in a body before one of the professors distinguished for his knowledge of Natural History—"Would the Professor oblige them so much as to tell them the name of that bug?" The old gentleman took it—looked at it—put it down, and took out his glasses and examined it again—and a twinkle was seen in his eye, "Gentlemen," he said, "that is a remarkable bug—a *very* remarkable bug! It looks to me like a specimen of the *hum-bug*."

The instances of Mimetic Analogy which I have hitherto brought forward have betokened providential care for the safety of insects, without loss or detriment to the creatures to which there has been a resemblance. I will now cite one or two of a somewhat different character.

There are certain species of parasitic bees called cuckoo bees, which do not construct cells, and provide a store of pollen for their own larvæ, but visit the nests of their more industrious relations, and lay their eggs in the cells which the owners had prepared for their own young. A bee comes to deposit an egg in a cell which she has previously stored with pollen; but the cuckoo bee has been before her, and she finds an egg therein. She turns away—we can almost fancy her saying to herself, "Dear me, how forgetful I am"—and goes to work upon another cell.

The cuckoo bee bears a close resemblance to the bee whose domain it invades. The chief difference that appears is that, whereas the industrious bee has the broad hollowed shank which all the pollen collectors have, the parasite has a rounded shank.

But there is a third insect, strangely like both the others, which frequents the nest, and which is not a bee at all, but a two-winged fly—an insect more to be dreaded than the cuckoo bee. The young of the cuckoo bee eats the pollen that has been provided for another larva; the young of the fly eats the larva itself. Mr. Noel Humphreys thus describes the creature and its operations:—

"This odious looking creature, with its broad tail, armed with sharp spines, and its muscular body tapering to the head, and furnished with rigid serrations along each side, forms a striking contrast to the soft helpless larva of the bee. Like all the larvæ of the Syrphidæ to which the genus Volucella belongs, it is blind, but resting attached by the broad tail, it moves its head rapidly about as a feeler, before changing its position. The spines at the tail may be adapted to enable it to raise itself up the smooth sides of the cell of the bee larva, in case that one infant bee should prove insufficient, and that it might require to pass on to the next cradle. But it may be as well to describe the progress of the parasitic larva on the supposition that one baby bee will prove enough for its purpose. The devoted larva of the bee, then, is gradually eaten alive by the parasite, which, with seemingly horrible instinct, spares all the actually vital parts, taking only the more fleshy portions, until the carnivorous young Volucella feels itself full fed and ready to undergo its torpid state of change. Then the last remains of the wretched infant bee are greedily consumed, and the parasite passes into its sleepy chrysaline stage, taking its long *siesta* in the comfortable cradle whose infant tenant it has devoured, and from which it eventually comes boldly forth in all the pride of its winged and perfect state, walking out of the bee-home as from its own proper abode, and attracting no notice whatever from the bees in whose nursery it has performed the odious act of eating a baby bee, and appropriating its comfortable cradle cell. The stolid unconsciousness with which the bees allow this insect vampire to pass out and escape from the scene of its horrid proceedings with impunity, has induced some naturalists to believe that the carnivorous *Volucella* owes its safety to the complete disguise in the colouring of the bee, which is supposed to be so perfect as to deceive the bees themselves into the belief that these strangers are members of their own fraternity."

Instances of Mimetic Analogy are not confined to the insect tribes. Did the reader ever see a flock of young grey turkeys throw themselves upon a granite rock and lie motionless keeping a watchful eye on the hawk gliding in the sky above them? How closely do the female Bob-o'link and its eggs resemble in their colours the foliage around the nest! How difficult it is to distinguish the young of the ruffed grouse as they crouch in the herbage when an intruder comes suddenly upon them. It cannot be doubted that numberless lives are prolonged, by the resemblances to surrounding objects, and the instinct to make the most of these resemblances, with which God in His providential care has gifted so many of His creatures.

NOTE ON THE TIGER BEETLES.

BY REV. THOMAS W. FYLES, SOUTH QUEBEC.

Fig. 25.

Fig. 26.

Fig. 27.

The insects called Tiger Beetles (Figs. 25 and 26) are predatory in their nature, very active in their habits, and elegant in their appearance. Many of them are perfect gems, clean cut and polished.

The plan pursued by the larvæ (Fig. 27) of the Tiger Beetles for capturing their prey was first made known by M. Desmarets. The account reads like a chapter in one of those dreadful sensational stories, in which trap-doors are made to open upon indescribable horrors.

The Cicindela larva sinks a narrow shaft about a foot deep in the soil, then climbs

to the top of it, covers its broad flat head with sand, and waits. By-and-bye some poor innocent, taking the air, steps upon the living door of the deadly oubliette. Down goes the larva *instanter*, and down goes its prey; and what transpires when they reach the bottom must be left to the imagination.

The perfect insect is as voracious as the larva, but it hunts down its victims in the face of day and often has to do battle for the prize. I have in my cabinet a specimen of *C. vulgaris* which has a peculiar lump upon one of its front legs. That lump is an honourable distinction. It is the head of a large ant (*F. Pennsylvanica*) slain in single combat—the whole head. How much more complete a decoration than the necklace of the teeth of his slaughtered foes, which the South Sea Islander used to wear, is this! On that fatal day—the day of the combat—the beetle and the ant set out from their respective abodes, each with courage high and appetite keen. Both were distinguished warriors, and

"When Greek meets Greek, the tug of war begins."

They met, and, as the Yankees say, "went for one another." The ant seized the beetle by the leg, but that was enclosed in armour of proof. The beetle seized the ant by the neck—a smaller neck than poor Ann Boleyn's; no wonder the head came off! But those determined jaws held on grimly in death. No effort of the conqueror could relax them and by no effort could he reach the head to bite it away; and so he carried it about with him as a trophy of victory.

THE HESSIAN FLY.

BY JAMES FLETCHER, OTTAWA.

The above is the title of an admirable pamphlet just issued by Miss Ormerod, Consulting Entomologist to the Royal Agricultural Society of England, and adds one more to the many boons for which the agricultural classes in England are indebted to this talented lady. Although all the information published is contained in twenty-one of the small pages of a crown octavo pamphlet, so methodical is the arrangement and so concise are the statements, that it may be said to contain all that it is important for the farmer to know of what has been positively ascertained concerning the habits of this destructive insect, and the most approved remedies for keeping it in check. With Miss Ormerod's pamphlet he can, in a few minutes, learn from her excellent illustrations whether an attack upon his crop should be ascribed to the Hessian fly or not, and if so he will also find himself provided with advice as to the best steps to take to limit the injury to the smallest possible amount.

Immediately upon the first appearance of the Hessian fly in England, Miss Ormerod, with characteristic promptness, visited the fields attacked and at once identified the marauder. That there should be no mistake in the matter, she referred specimens to the highest authorities, and amongst others to our ex-President Prof. Saunders. All of these agreed with her that it was the true Hessian Fly. She then lost no time in writing to the newspapers, and in describing how the attack might be recognised. In a few weeks she had examined all the literature on the subject, and had accumulated a vast amount of information as to the extent of the injury committed; so that before the winter set in she was able to give the farmers good practical advice as to the best means of stamping out the new enemy. This she has now consolidated into the useful report under consideration. We have first a short historical sketch of the fly as an injurious insect; then an estimate of the injury caused during the past season in England and Scotland, which was considerable. In one English and three Scotch localities, the loss was calculated to be several bushels to the acre. The appearance of the attacked crops is described in a plain, intelligible manner, together with the insect in its different stages, from the egg to the perfect insect, and an abstract is given of its life-history. The important question, "Where does the Hessian fly come from?" is then discussed. This treats of the different means by

which the insect may be introduced, and it is shown that it may come in the "flax-seed" state amongst seed-grain, or in straw which, having come from infested countries, either as straw-cargoes or as packing, is used for horses and cows in London, and then sent out to farms in the country as slightly used litter, or as "long-manure." When this is the case, says Miss Ormerod, "a sufficiently large proportion of the flies in the flax-seed state are likely to develop to cause mischief, such as we have seen in the past season. On the first farm on which the attack was observed, near Hertford, I found, on enquiry, that London manure had been used of mixed kind, but mainly cow and horse manure, in 'very long' condition."

An observation of the greatest importance was made by Mr. Palmer, of Revell's Hall, near Hertford, viz., that the flax-seeds are separated from the straw in threshing. This was previously thought not to be the case; as however, they are thus loosened from the straw, they are of course liable to be mixed with grain and with it transmitted from place to place; but, in Mr. Palmer's case, they were not found amongst the grain, nor in the chaff, but in the dust and rubbish which falls beneath the threshing machine. In a handful of siftings he found no less than fifteen "flax-seeds." This rubbish is comparatively worthless, and if English farmers are careful always to burn it upon a waste spot, it will certainly reduce the number of the parent flies from which another serious attack may originate. It is the custom amongst our best Canadian farmers to do this in districts where the wheat midge (weevil) is prevalent, and it is attended with very satisfactory results.

Our authoress continues: "From the above observations it appears that puparia or 'flax-seeds' may be transmitted in corn rubbish. In samples of screenings and 'sweepings' from imported corn I have found, besides a large amount of live and dead beetles, also weed-seeds, smut and other matters undesirable to spread abroad, (as may easily be done where these are used for poultry food, and thus thrown out in farm yards), and as with these broken bits of stem are to be found, it appears at least possible that "flax-seed" may also be conveyed. In Dr. Packard's paper on the subject, he alludes to the possibility of the pest being transmitted in wheat."

The best methods of prevention are treated of at some length, and their applicability to the farming process in vogue in England is reviewed. The favorite preventive remedy—late sowing—is shown to be applied in England as an ordinary part of the regular arrangements of the work on most farms. As a rule, wheat is not sown until some time after the 20th September, the date which we consider the latest it is necessary to wait to avoid attack, and thus the young wheat plants are not up until after the autumn brood of the fly is dead. The importance of this point cannot be laid too much stress upon, for if late sowing be regularly practiced, the Hessian fly must be dependent, for its subsistance upon self-sown plants in fields which had been attacked, or upon rye or other grain sown as sheep-feed. This reduces to narrow limits the lines in which experiments may be successfully tried to prevent this enemy to England's staple crop from establishing itself and getting beyond the control of the farmers.

Perhaps, the most satisfactory feature about this outbreak of the Hessian fly in England, is the fact that it has appeared in so many places, and has thus been brought forcibly before the attention of farmers in all parts of the kingdom, and they being aroused, will now see the necessity of promptly carrying out the instructions necessary for its extermination.

The Royal Agricultural Society, through Miss Ormerod, and the Government, through Mr. Whitehead, have done everything in their power to apprise the farmers of their danger, and have put in their hands as weapons, with which they may confidently hope to cope successfully with their new enemy, concise information as to its life-history and habits, which will enable them to recognise it at once, and apply without delay the proper treatment.

Briefly, this consists of (*a*) late sowing of the main crop, so that there is no accommodation ready for the autumn brood by which a large proportion will necessarily perish without egg-laying; (*b*) feeding off, or ploughing in any early-sown or volunteer crops,

which may be found to be infested, so that the eggs and maggots may be destroyed; (*c*) deep ploughing by which loose puparia, or infested stubble may be buried too deeply in the ground to allow the perfect flies to emerge.

From the historical sketch which is given of the occurrence of *C. destructor*, it would appear that although a watch has been kept upon it since its first outburst as a destructive scourge in North America, in the year 1786, it had never been actually identified as occurring in Great Britain until July, 1886.

The large number of widely separated localities, however, from which its ravages have now been reported, might lead one to the conclusion, either that it must have been established for some time previous to that date, and that it was only Miss Ormerod's energy and zeal which then brought its operations to light; or that some special circumstance has taken place during the past summer by which it has been distributed over the whole kingdom; or again, that some special climatic condition has allowed it to exist where it had failed to do so before. For several years Miss Ormerod has had an active and observant body of intelligent workers in all quarters of Great Britain, and it is strange, if it existed at all, that nothing has been heard previously of its operations. Nevertheless, on the other hand, from the large quantities of straw and seed grain imported annually into the British Isles from countries known to be infested by this fly, together with the present rapid and easy methods of transport, it is at least extremely probable that it has been introduced over and over again, and it is difficult to understand why it has not long before now secured a firm foothold there. May it not be hoped that the law which applies with regard to many noxious weeds, will also be found to hold good in the case of this injurious insect?

The existence of any plant as an aggressive weed in a given locality, appears to be not so much a question of the introduction of the seed, as of the plant finding there the conditions suitable to its growth and healthy reproduction. There are many plants, for instance, troublesome weeds here, which must have been frequently introduced into Europe from this Continent, (or in some instances taken back again to the place whence we originally received them), but which have never yet taken forcible possession of cultivated ground, *e. g*, the Common Purslane (*Portulaca oleracea*), Hound's Tongue or Burrs (*Cynoglossum officinale*), Small Burrs (*Echinospermum Lappula*), and the common Foxtail Grasses (*Setaria glauca* and *viridis*); and then, although relatively they are far fewer, there are some which must have been frequently introduced on this continent, but which, except in a few localities, cannot (or do not) exist for more than two or three seasons, *e. g*, the Common Scarlet Corn Poppy (*Paparer Rhœas*), Scarlet Pimpernel (*Anagallis arvensis*), Common Groundsel (*Senecio vulgaris*), Corn Gromwell (*Lithospermum arvense*), and the Common Nettles (*Urtica dioica* and *U. urens*). In the same way there is no doubt whatever, that the Colorado potato bettle (*Doryphora 10-lineata*), has been many times conveyed to the British Isles on transatlantic steamships; but not finding there conditions suitable to its requirements it has failed to establish itself.

Miss Ormerod, quoting from Bulletin 4, U. S. Ent. Com., tells us that "the original habitat of the Hessian fly is considered most probably to have been Southern Europe and Western Asia, *i. e.*, about the shores of the Mediterranean Sea," a district with a summer climate of far greater heat and aridity than is found in the British Islands. Again, in North America, where, whether introduced or indigenous matters not in this connection, this pest to our sorrow flourishes to a most remarkable degree, it has always dry, hot weather during the periods in which it passes through its active stages.

In view of the above facts, and notwithstanding that it has occurred in considerable numbers in many parts of Great Britain during the past summer, I think it probable that its widespread appearance as an injurious insect, was due either to some special cause which had not existed before, or to some unusual climatic condition, rather than to its having established itself in a new habitat suitable to its reproduction and increase. Furthermore, if the farmers can only be frightened sufficiently to induce them to obtain the pamphlet under consideration, and to follow closely the advice which is there offered them, I cannot help thinking that before very long Miss Ormerod will be able to relegate the Hessian fly to a place amongst the foes she has conquered.

A NEW LIBRARY PEST.*

BY DR. H. A. HAGEN, CAMBRIDGE, MASS.

Everybody now-a-days has books, even if he never reads them. It has become an acknowledged fashion—the more books the larger the wisdom, the finer the culture. The climax is reached in France, where you can buy as decoration for fine rooms large libraries, where all the prominent classic authors are represented only by the handsomely lettered backs of the volumes, stored in cabinets with glass doors. The key of the cabinets is invariably mislaid; in fact, the cabinets do not open at all. But even where book-cases contain real volumes, it is interesting to observe which authors are never taken out. In German private libraries, the binding of Klopstok's masterpiece, the Messiah, is almost invariably as fresh as possible, and in England and here I have often seen Paradise Lost in a very fine condition. As an instance of the contrary, when I was a young man, an older prominent naturalist singled out a volume from my library in a condition best to be described by book and binding in tatters, and then exclaimed: "That is just how I like to see books." It was on bugs, and my scientific digestive organs were at that time in excellent condition. Later I was always interested in picking out books in similar condition in libraries, in order to have an idea of the taste and favorite studies of the patrons. I should state that the first prize could be given to a copy of Peppy's Memoirs, in the truest Billingsgate condition, greasy as candles. It was in a library intended for the culture of the young.

Let that be as it is; but certainly no owner of books likes to have his property destroyed except by himself. I had believed until recently that the most obnoxious enemies of books were my special friends, the insects. But I see now that I was decidedly wrong. A most interesting publication, "The Enemies of Books," by William Blades, in London, which has gone through three editions during the past five years, shows conclusively that men are far greater enemies of books, at least in old England. Mr. Blades describes everything injuring books—fire, water, gas, heat, dust, neglect and ignorance. Then come two short chapters on the book-worm and other vermin, followed by chapters on bookbinders and collectors. The small volume contains facts which will be read with virtuous astonishment and disgust. A rich shoemaker, John Bagford, one of the founders of the Antiquarian Society, in the beginning of the last century, went from library to library, tearing away title pages from rare books of all sizes. These he sorted out according to nationalities and towns, and so formed over a hundred folio volumes now preserved in the British Museum. Others collect initials on vellum, all rich in gold and colors, floral decorations ranging from the 12th to the 15th century, all nicely mounted on stout cardboard. A Mr. Proeme collects only title pages, to follow a senseless kind of classification. One of his volumes contains coarse or quaint titles, showing how idiotic or conceited some authors have been: "Bowels Opened in Diverse Sermons," "Die and be Damned," and many others too coarse to be quoted. Certainly it is sure that the poor bugs cannot compete with such rivals, except some more enterprising ones, apparently bound west, and going straight through eighty folios of patristic works, making them look like a spy glass, in a fashion never dreamed of by Chrysostomus and his partners.

Nearly six years ago, I was invited to make a communication about library pests, at the meeting of the librarians in Boston. After a review of the literature then at my command, I came to the conclusion that only two insects were to be considered very dangerous and obnoxious in North America, the Anobium and the White Ants. The Anobium is a small beetle, which is also very destructive to old furniture and old picture frames. All who have the infirmity to indulge in the love for old furniture, will have often observed with disgust small round openings in their treasures, out of which a fine mealy dust falls in little heaps on the floor. I observed myself such a case long ago, when I was a boy, but I confess that the remembrance of this case is always accompanied

* Read before the Boston Thursday Club.

by a strong itching of my right ear. A lady cousin of mine, who was a lover and lucky owner of such old jewels, had decided to take care of them herself. I had been naughty enough to write the date in these dust heaps with my fingers. When I impudently ventured to show her about a fortnight later the date I had written still undisturbed, the only acknowledgement of my service came forth with admirable dexterity.

Use every man after his desert, and who should 'scape whipping?

Nevertheless I gave up forever this kind of chronological record.

Three additions to my communication before the librarians have been published, but they contain only isolated cases, certainly nothing of general importance. Of course the insects mentioned had injured books, and as everybody likes to have his own little pest, the new comers were chronicled with some emphasis. Nevertheless I have followed up the matter carefully during these six years, and would be able to give a nice list of names of more or less queer composition. Six years ago a part of the publication on book pests was not to be found here. But in the meantime I have been able to get some of them, the most important ones through the splendid custom of the public library of ordering books wanted by scientists for their study.

There is, in fact, no end of obnoxious creatures. "Misery acquaints a man with strange bedfellows." Perhaps the word obnoxious is not exactly in the right place, as probably those bedfellows may consider the intruding stranger decidedly obnoxious. Nevertheless, as such philosophical views would destroy every legitimate museum's business, we are bound to our accustomed impoliteness towards all intruders.

One morning Mr. R. T. Jackson, assistant in Geology in the Museum, asked my advice and help against a new pest in his department. The stones and petrefacts were left untouched, but all the new labels, written during the past year, were more or less injured, or nearly destroyed. Of course this is a serious danger for a collection, as the specimens lose their value if the locality or the scientific name is lost. A new form of labels had been chosen last year, printed on excellent card paper. The stones are kept in small square open boxes, the label is folded in the middle; upon the lower half the stone is laid, to keep the label in place; upon the upturned half the locality and the name are written in order to afford an easy view of the contents of the collection. Now, since last winter this upper half has appeared to be scraped on both sides in such a manner that the writing is injured and in some cases has disappeared. The lower half of the label was similarly injured, so far as not covered by the stone; the under side of the lower half proved never to be injured, and was apparently protected by the bottom of the box, to which it was pressed by the weight of the stone. The damage is a considerable one, as the whole collection has again to be provided with new labels. A careful research led to the discovery of an insect belonging to the genus Lepisma, which lived in the boxes and cabinets. The old labels of common writing paper were never attacked, therefore it was to be presumed that the finish of the new labels was the attraction to the insects. Indeed, Professor C. L. Jackson found the new labels finished on both sides with starch, and without doubt the starch covering attracted the Lepisma. I was rather puzzled by this fact. It has been known for more than a century that the greatest library pest, Anobium, does not like starch. Therefore it was recommended to use in binding books only such paste as was made of pure starch without meal, of course also with the addition of several drugs of the most vicious odour; and now a new customer proves to prefer starch to other things. It is, by the way, a queer but very common association of ideas that substances with an unpleasant scent to man should also be unpleasant to insects. But the virtuous hater of Rockfort or Limbourg cheese would directly be disabused by discovering with a common hand lens a lively carnival of bugs in those disgusting dainties.

The Lepisma destructive to the labels is a true American insect, described by Professor Packard as *L. domestica*. It belongs to a small group of insects with the euphonious name Thysanoura, and there are half a dozen species known in the United States. The principal one found in Europe is the *L. saccharina*, better known as the small blue Silverfish. This little insect is found in dark places or corners near provisions, running very fast, and being so soft that it is crushed by the lightest touch. In Europe it has always

been considered, but without proof, as imported from America. It has been known there for more than 200 years, but its existence cannot be traced before the discovery of America. The whole body of the insect is covered with very fine iridescent scales, which have been used as a delicate test object for microscopes, and are the cause of its vulgar name, Silver-fish.

The earliest notice of the small European species is in R. Hooke's Micrographia, a folio, London, 1665. It was printed at the expense of the Royal Society, and is an account of innumerable things examined by the microscope. The book is still respected for the accuracy of the author's observations. Mr. Blades calls it most amazing for its equally frequent blunders. I have reason to suppose that the absurd blundering is more on Mr. Blades's side. R. Hooke calls it book-worm, and states that it corrodes and eats holes through the leaves and covers of books. The figure is, for the time, tolerably good and recognizable. On Mr. Hooke's authority, Lepisma was reported as obnoxious to books. As Mr. Hooke has apparently mixed up the destructions done by Anobium with those of Lepisma, of which in the following hundred years no damages were observed, the whole observation was doubted, and Prof. Herman, in Strasbourg, in his prize essay on library pests, declared (1774) that Lepisma was erroneously recorded as obnoxious. This was the reason that I did not mention Lepisma in my communication to the librarians, the more so as in the past hundred years no new observations had again been recorded. I did not mention other remarkable facts, as the Jehthio-Bibliophage, a codfish which had swallowed three Puritanical treatises of John Frith, the Protestant martyr. No wonder, after such a meal, the fish was soon caught and became famous in the annals of literature. This is the title of a little book issued upon the occasion: "Vox Piscis, or the Book-fish, containing three treatises which were found in the belly of a Codfish in Cambridge Market, on midsummer eve, 1626"; great was the consternation at Cambridge upon the publication of this work.

Nevertheless, just after the delivery of my communication, new proofs of the depravity of Lepisma came forward.

"God made him, and therefore let him pass for a man."

Prof. Westwood, of Oxford, showed to the Naturalists' Association in 1879, a framed and glazed print of which the plain paper was eaten by Lepisma, while the parts covered by the printing ink were untouched. I accept this as a sufficient proof of obnoxiousness, the more so as the white paper is often the best part of a print. Prof. Westwood mentioned that the same fact had been observed in India, where some of the Government records had been injured in the same manner.

Patrick Brown states in his Natural History of Jamaica, that *Lepisma saccharina* is very common there, and is extremely destructive to books and all manner of woollen clothing. This notice had been reproduced by Linnæus, but was later considered as not reliable.

Mr. De Rossi writes, in 1882, as follows: *Lepisma saccharina* likes damp places and destroys in my house paper hangings from inwards entirely. Muslin curtains were perforated and the living animals found near fresh holes. Probably the curtains were starched, though it is not stated. Also, insect boxes and the wings of butterflies have been damaged.

Prof. Liversidge, in Sidney, reports the same year *L. saccharina* as very common in New South Wales. It does not do so much harm to books, as it cannot well get in between the closely pressed leaves of a book, but it injures loose papers, maps and labels; the loose edges of piles or bundles of letters suffer more than the central portion. Writing paper, too, probably contains more attractive matter in the way of size. The labels were written only fifteen months ago, and some hundreds have been rendered totally worthless.

The same calamity is reported by Mr. H. Lucas, assistant in the Museum of the Jardin des Plantes, in Paris. *L. saccharina* destroys labels of white paper, but the parts printed with oil and minium remain untouched. The labels on starched paper were very much injured, but only the white parts. When leaving for the country in 1862, he put in a drawer various articles of clothing, all starched, collars, cuffs and bonnets, and returning after six weeks, he found numerous holes, round or oval, in a bonnet, and Lepisma near by.

On the labels of Polyps, Madrepores and others in the Museum, the writing was in a great part destroyed. Dr. Aube, in Paris, says that the black part of the backs of bound books was nearly destroyed, probably by Lepisma.

Mr. Samuel Henshaw, Assistant of the Society of Natural History in Boston, enclosed purposely living Lepisma with soft paper, part of a newspaper, in a glass jar, and ascertained that the insects had eaten large holes in the paper.

The well-known antiquary, Mr. Quaritch, in London, had complained, 1870, of the ravages done to books ; and Mr. Lewis, in London, after careful examination, stated that by eating parts of the bindings the books were caused to fall to pieces ; yet he considered it impossible for Lepisma to bore holes in the books, which were probably made by Anobium. Prof. Packard, in his Guide, reports of silk and silken tapestry eaten by Lepisma, which also devour the paste, making holes in the leaves of books. Also Mr. Horne, in London, alluded to the damages done to silk garments in India by Lepisma. The insect evidently attacks the silk on account of the stiffening matter in it, but nevertheless makes holes in the fabric. Finally, Mr. Adkin showed a species of Lepisma which damaged account books kept in the iron safe of an office in London.

After all these reliable facts, there is of course no doubt that Lepisma, when left undisturbed, may become very obnoxious. The question, Why has that not been observed long ago? may be answered by the well known "I awoke one morning and found myself famous!" I think there is a very simple explanation. There are so many rogues who work in the same way, that the swiftest one to disappear is often easily overlooked. Many times I have been told by ladies that their silk dresses, always black ones, had been destroyed by carpet bugs, and have always answered that the carpet bugs only attack wool. Indeed, I confess that I have only recently learned that these aristocratic desires belong to the Silver-fish.

If we tabulate all the facts, we find directly that all damages, except those to paper and its combinations, have been inflicted on silks, clothing and muslin curtains which were invariably starched or finished with some stiffening size, making them more easily eaten or eroded. Secondly, the backs of books have been more or less seriously injured. But just here paste had been used in quantity. The gold lettering of the backs is commonly done by putting the gold on paste and burning the hot brass letters into the back. I have been assured that in one case only the gold of the lettering had disappeared. There is no wonder that silken and paper tapestry has been eaten ; but it is to be hoped that the industry now common of making paper hangings solely of arsenic may induce Lepisma to emigrate to more hospitable quarters.

That labels in collections have been destroyed, is observed here, in France and in New South Wales. All those labels were starched. Prints have been destroyed in England ; letters, when lying loose or in heaps, and Government records in England, in New South Wales and in Boston. I think many gentlemen present will find the most rascally instance of destruction is the making erasures in account books in the safe.

After all these facts, there is no doubt that maps, engravings, collections of photographs, herbariums, even label catalogues, are in evident danger. But if we look more closely at the injuries reported, we find directly that all such papers, when pressed firmly together, were not reached by Lepisma, and in this way a large number of accidents may be avoided. Engravings and maps, which would suffer if pressed too hard, will be perfectly safe in simple pasteboard boxes, provided that they are made to close perfectly, so that it is impossible for Lepisma to find an entrance. Insect powder sprinkled in the nooks and corners where Lepisma is often observed—in Cambridge, behind the kitchen stove or range—kills directly all reached by the powder, and I should recommend the same for silk dresses or the closets and drawers in which they are stored. Concerning valuable engravings, I would cover the backs of those framed with common paper fastened on with a paste mixed with insect powder or tincture. I consider, therefore, Lepisma as not dangerous *when proper care is taken to prevent the danger.*

The most dangerous enemies to papers and books are the White Ants, the Termites, because they destroy everything and avoid the daylight when they work. As I had before this the pleasure of delivering a communication on this subject, I will give only some additional facts which have come to my knowledge during late years. The com-

mon white ants of the United States are to be found everywhere, from Manitoba down to the Gulf of Mexico, and from the Atlantic to the Pacific. In the mountains in Colorado, Washington Territory and Nevada, they ascend to 5,000, and even above 7,000 feet. It is of course not possible to exterminate them, but they must behave if they intend to live together with man. Their depredations should not exceed certain limits allowed to them. Everybody is accustomed not to forget for one moment the precautions necessary to protect his property against destruction by fire, and if the same precautions were taken and not for one moment forgotten, against the destruction by white ants, I think all that men are able to do would have been done. Of course, very valuable property we are accustomed to shield by fire-proof buildings, and similar caution will be necessary to protect very valuable property, *i. e.*, libraries, against white ants. Buildings should be stone or brick, and all stumps or roots of trees taken out of the bottom of the cellars to a depth of six feet before the cellar floor is carefully cemented. Outside the building should be surrounded by a deep open area ; no flower beds, shrubs, ivy, as the necessary manure is the greatest attraction for white ants.

Large cities are certainly in less danger, at least some parts of them. I am sure that all that is called Back-bay in Boston, will be free from white ants, if they are not brought in by nice parks and similar fineries. The older parts of Boston are by no means free from the pest, but for palpable reasons the owners of infected property do not like to speak of such things. Their presence in the State House, in the so-called Dungeon, was noted in the papers four years ago. As nothing has been done to prevent the pest from entering other parts of the building, it is very probable that they have spread further. The note in the newspapers about the sudden break down of the wooden stand supporting the ensigns and standards, looks very suspicious. Perhaps white ants may know more about it. In the Dungeon only the taxation papers of the State were stored, and the white ants, when I saw it, had arrived at the twentieth year of this century. According to another notice in a newspaper (I cannot say if it is true), the archives of the Board of Health have been placed in the Dungeon—as the notice stated—for preservation. As the State House was built on a place that was formerly a beautiful garden, it is very possible that stumps not taken out may be the cause of the presence of the pest. To find out where the white ants came into the Dungeon, and to follow their gangs outside the building, would be the first and most important step to take. Indeed, two years ago a Bill asking for a paltry sum for this purpose was brought before the Legislature, but laid upon the table. In a boarding house in France, infested by white ants, the floor of the dining room suddenly came down two flights, together with the table boarders. It is gratifying to learn that nobody was hurt, and, as it is stated, they lost only their appetites for one day. So we may hope that if the Legislature should come down in a similar soft manner, they may lose only their appetites for one day, and that this *argumentum a posteriori* may be followed by an enlightenment about the pest. Indeed, the State House is not the only place infested by white ants in those parts of the city. A few months ago an old bachelor, in a house very near Mt. Vernon street, had to take out all the injured lumber supporting the walls and to replace it by new. When told by one relation that it was rather dangerous, he answered that he felt very comfortable, as it was only every ten years he had to meet this expense. In the neighborhood of the State House, in small courts, are some sickly-looking old trees, probably dear old pets of the owners. They have decidedly the appearance of knowing something about white ants. That may be as it is, but I believe that no library here is more in danger than that in the State House, and I am told that it contains very rare books, difficult or impossible to be replaced. The Athenæum, situated near the State House on one side bordering on an old churchyard, seems at first in a rather dangerous situation. But the very substantial building, with high, and, I believe, vaulted basements, makes danger to the library appear very improbable. Nevertheless, it would be reasonable to always have the pest in mind, and to often make a revision of those parts of the library which are little or rarely used. The Public Library does not seem in danger, but I know the surroundings only imperfectly. After all these gloomy predictions, I may assert that nobody would be happier than I if they were forever unfounded, and the librarian might say, What's Hecuba to him, or he to Hecuba!

BEGINNING AN ACQUAINTANCE WITH WILD BEES.

BY J. A. GUIGNARD, OTTAWA.

On a hot, bright day of July, 1883, I visited a cedar and larch swamp near Ottawa, particularly rich in plants of that magnificent Canadian orchid, the showy Lady's Slipper, (*Cypripedium spectabile*). Their conspicuous pink and white blossoms were at the time in all their glory; however, they were not exactly the attraction for me. My object was to find out, if possible, what insects know how to appreciate them and take advantage of their store of nectar. Which of those dwellers of the air could it be, that so far trusted the curious mocassin-shaped lip, as to dare to penetrate its recesses? Having observed the behaviour of flies imprisoned in such flowers,* I had been led to understand how certain insects of proper size, in their search for the sweet juices, must be the agents of fertilisation of the plant. They enter through the large aperture above, but on account of the peculiar conformation of the cavity, they can come out only through one of the smaller openings under the anthers at the base of the flower, and there, if of proper size, must of necessity rub their backs against the anther above, thus detaching some of the gummy pollen, which they afterwards unconsciously carry to the stigmas of other flowers.

Though I had before taken advantage of every opportunity of watching *Cypripedium* flowers, I had not yet succeeded in finding any live insects in them. But, as I now kept peering into every lip that I could see amongst the high herbs and grass, at last I noticed a dark object in one of them. I quickly threw my net over the flower and very soon there came out a bee through one of the posterior apertures. A *bee*, I said;—it was at least an insect very like the honey-bee, as to size and general appearance, but blacker and more massive in all the parts of its body. The posterior legs, however, were shorter and lacked the characteristic width of the part which the honey-bee uses as a basket for carrying pollen from the flowers to the hive. But this deficiency in the wild insect was amply compensated by a thick lining of black hair covering all the lower surface of the abdomen; and in many species of this and allied genera, I have since often found this brush loaded with white, yellow, red, or brown pollen altogether concealing the hairs.

In Lady's Slippers, however, such a brush was of no use to the insect, as the adhesive pollen of the stamens could only mat the hair, coating and crippling at the same time the legs and other organs which might become besmeared with it. The anther, nevertheless, does not let the bee escape without some pollen adhering to its back, where it can least impede its movements. I replaced the insect several times in different flowers, and saw it always follow in them the same road; it immediately disappeared in the narrow passage under the stigma, which retained some of the pollen and issued under one of the anthers after a more or less energetic struggle, according to the size of the aperture and the rigidity of its edges, which always become relaxed with age. If introduced into a flower of small size, from which it could not force its way as before, the insect had a very quick method of regaining its liberty; it immediately began to bite and tear away the walls of its prison with its two powerful jaws or mandibles, and very soon enlarged the opening or cut a new hole. The mandibles are indeed remarkable instruments, stout and strong, compared to which those of the honey-bee are like knife blades by the side of lumbermen's axes. They are triangular in shape and toothed on the inside edge, where they close against each other, so as to form excellent nippers.

I had never previously felt the need of much knowledge of bees, nor indeed of any other insects, but I very naturally felt now a desire to know the name of this useful servant of the showy Lady's Slipper. I therefore brought it to entomologists of my acquaintance,—eminent entomologists, deeply versed in the lore of beetles, of moths, of butterflies, but who, to my great disappointment, had up to that time somewhat neglected that of bees, so that I could not get from them the help I wanted. I then turned to books, and again, was not a little astonished to find that there was not one single work in English treating of the classification of American bees in the same way as the numerous

* See "Le Naturaliste Canadien," Vol. XIII. (1882), p. 221 and XVIth Report of the Entom. Soc. of Ont. (1886), p. 45.

works on the North American flora, elaborately describe the different orders, genera and species of plants. I was, therefore, glad to find the information desired in a French work published in Quebec, Abbé Provancher's "*Petite Faune Entomologique*," just then completed to the end of the order Hymenoptera, which comprises the bees, wasps, ants, ichneumon-flies, saw-flies, etc. After some little labour, I succeeded in ascertaining in that too modestly named Fauna, both the generic and specific names of my insect,—*Megachile melanophœa, i.e.* the black-brown Leaf-cutter.

The name of the genus having thus been obtained, it was easy to gather more information in works treating of Hymenoptera, especially in those describing the labours of the parent bees on behalf of their offspring. Thus I found that the habits of the Leaf-cutters were observed and described by the French naturalist Reaumur, as early as the beginning of the last century. Mr. E. Baynes Reed, in the Second Annual Report of the Entomological Society of Ontario (p. 24), and Mr. W. H. Harrington in the XVIth. (p. 53), have given the principal facts of their history, how they cleverly cut circular pieces of leaves with their mandibles, and use these pieces in the construction of the cells of their nests.

Megachile centuncularis, L., which is spread all over the continent of Europe and also occurs commonly in Canada, chooses for its nest either an old post or decaying tree or the soft mortar of an old wall, or again burrows in the ground (Smith, Brit. Museum Cat. I. p. 174). The powerful mandibles are of course the instruments used to dig the gallery in which the cells are then placed end to end from the bottom up to its mouth. The bees also sometimes take advantage of cavities which they find suitable for their purpose, such as a nail hole, or the deserted tunnels of wood-borers. I have seen repeatedly come in and out of such holes the active little *M. optiva*, which is easily recognized by its red ventral brush, and *Gnathocera cephalica*, Prov., a bee very closely allied to the Leaf-cutters, but which at last stopped the aperture with mud, and probably like other bees builds its cells of that substance. I was not able in the latter case to ascertain what was the material of the nest itself, as it was in a post of a public bridge. But I opened, after its completion, the nest of *M. optiva*, which was in a board of a shed and found it to be composed of several rows of cells packed up side by side, the cavity being too wide for a single row. The insect seemed, however, to have always made as many cells as possible in one line, according, no doubt, to its habit of doing so in the straight galleries which it digs itself. The cells were formed with morsels of leaves and flowers of scarlet runners. The aperture itself, which was just large enough to admit the insect, was stopped up with about twelve round pieces laid on each other, each slightly larger than the hole, but forced in so as to fit perfectly, the last one outside being a red one. The nest contained about twenty cells which I was very careful to secure and preserve in the hope of procuring the perfect insects, and if possible, by some happy chance, to obtain in the number a male, that sex of this species still being unknown to science. My hopes, however, were doomed to disappointment. After the return of spring, weeks succeeded weeks, but the cells still remained closed; and finally, instead of the bees, there issued from them through tiny holes, scores and scores of a Chalcidite, *Semiotellus cuprœus*, Prov. These small parasites had not spared a single one of the larvae for which the mother *Megachile* had on the preceding summer provided with so much solicitude and industry.

On a subsequent occasion, I found the broken stem of a sun-flower in the hollowed pith of which some Leaf-cutter had built half a dozen cells with morsels of rose leaves. These pieces were much looser than those in the nest of *M. optiva*, and made the cells appear much larger, so that I expected to see much larger bees come out of them. They proved, however, to be of a rather smaller species, *M. brevis*, Say (Fig. 18), of which I have found the males very abundant, but have never been fortunate enough to secure a female. From this nest I obtained only males, two of them, and—four parasites, again Chalcidites, but much larger than in the preceding case, so that each had required a whole *Megachile* larva for its subsistence. These parasites were two males and two females of the pretty wasp-like *Leucospis affinis*, Say; other species of the same genus have also been found in Europe infesting *Megachile* nests.

A most peculiar situation for the nest of a Leaf-cutting bee has been described by Mr. E. Baynes Reed in the article already mentioned. The cells were made in the rolled-up leaves of a plum-tree (Fig. 28). I have seen *M. optiva* at work cutting pea leaves, and I suspect the same insect had removed the circular pieces that were wanting from leaves of an ash-leaved maple that grew close by.

Fig. 28.

The males of many species of *Megachile* have the anterior tarsi very oddly dilated and fringed with long hairs; some have besides the first joint grooved in front forming a remarkable pouch. In *M. frigida*, this pouch extends only to the end of the first joint; but in *M. scrobiculata* it projects above the second, and in *M. pugnata* even projects over both the second and third. Of what use this appendage can be to these insects is not easy to conjecture. I found in one two little particles of vegetable fibre which seemed to have been nipped from some young plant-stem or branch. Could it be that the male helps the female in the preparation of the nest, and brings in his pouches masticated vegetable matter for the purpose? Smith (*l. c.*, p. 158), states that such matter is found closing the cells of an *Osmia*, a genus belonging to the same sub-family as the *Megachile*, the Dasygastrae (so called from *Dasys*, hairy, and *Gaster*, belly). In the two nests which I have examined, I could not, however, find anything else in the cells besides a crust composed of pollen grains united by some gummy matter having no sweet taste that I could perceive. The pollen, examined with the microscope, seemed to come altogether from flowers of compositæ, with the exception of a few stray grains, in one case, of evening primrose, in the other, of pumpkin.

It is a most interesting sight to watch the busy mother bee intent at work on a composite head of flowers. It collects the honey by protruding its long tongue into one corolla after another, while with the posterior legs it brings the stamens of other flowers against its ventral brush, which retains the delicate pollen granules. When gathering pollen only, it may occasionally be noticed, moving rapidly over the disc of flowers while sweeping the stamens with its brush. But who will ever succeed in witnessing the manner in which the pollen is afterwards removed from the brush, heaped in the prepared cell and mixed with honey to form the food of the larvae not yet born? I have noticed once a *Gnathocera* female just coming out of its nest, re-enter it backwards either to deposit pollen or more likely to lay an egg, and soon come out again, but only to go in once more, head first this time, to see if all was right and then fly away.

After I had once been induced, as I have related, to give some attention to Hymenoptera, and seeing how great a part this order of insects plays in the fertilisation of plants, I could not stop at my first steps in their study, and have found, whenever I had the possibility, much pleasure and instruction in trying to improve my first acquaintance with them. There is yet so much unknown as to the life history of those that have been observed at all, so many have as yet received no attention whatever, that they offer an immense field of discovery for any one willing to use his eyes in observing what is going on about him on all sides. In the middle of the city of Ottawa, in my house and yard (the latter ten yards by four, but as thickly filled with plants as they can grow), I have captured specimens of more than 120 species of Hymenoptera alone, about 30 of which when submitted for identification to Abbé Provancher, our highest Canadian authority on Hymenoptera, have been declared by him to be new to science.

SHEATH-BEARING INSECTS.

BY REV. THOMAS W. FYLES, SOUTH QUEBEC.

It has been said that man is the only animal who is born naked, and the only one who can clothe himself. This is not strictly true. At any rate quite a number of caterpillars are expert tailors.

The smallest of the English thick-bodied moths is *Fumea nitidella*. As soon as the tiny caterpillar of this insect bursts from the shell, it commences to make itself a coat. The workman in his finished work, seen by the naked eye, resembles a minute pillar of pith set on end. Seen through a microscope the covering is thimble-shaped, and appears as if made of tissue-paper of variegated colours (Rev. E. Tearle in Ent. Int. No. 147); and the caterpillar, seen through the same medium, resembles that of *Cossus ligniperda*. The young exquisite, when sporting its elegant attire, walks with its fore legs, and holds its coat on with its hind ones, toppling about unsteadily. Sometimes it is quite extinguished by its apparel. It reminds one of a little child wearing its father's hat—you see the laughing face for a moment, and then the big *chapeau* slips over it, and it is gone.

As the *Nitidella* grows, it finds it necessary not only to enlarge, but to strengthen its coat; so it attaches to it ribs made of small pieces of pine-needles, or of stems of grass, which seem to answer the purpose admirably.

The coat of the *Nitidella* is an important article. It is not only the winter clothing of the caterpillar, it is also the case which protects the chrysalis. The female, indeed, never leaves her coat; she creeps as a perfect insect. (In one sense, perhaps, she ought not to be called a perfect insect, for she has only rudimentary wings.) She creeps from under her coat and then takes her seat upon it. She sits upon it with as much determination as an old lady in a railway station sits upon her trunk to keep it safe. She holds her court upon it. She lays her eggs around it, and at its foot she dies. The coat is her home in life, and her monument in death. Her infant progeny, opening their eyes to the light, see her good work, and go and do likewise—they take, severally, in paper of their own manufacture, a pattern of the coat.

The Coleophoræ, of which forty-one are described by Stainton in his Natural History of the Tineina, afford remarkable instances of caterpillars having the power to clothe themselves. Mr. Lane Clarke, who turned one of these insects out of its case, thus describes its proceedings for the formation of a new one:—

"It had fixed near the edge of the leaf, and was carefully eating out the parenchyma of each serrature, leaving the edges untouched, as it thereby saved a seam in the tent, yet emptying each tooth to make it light and less brittle. When all was clear, the larva measured a gentle curve a little larger than its body, and began to draw the cuticle together on the opposite side to the serratures—tacking it loosely at first, and biting the membrane between the fibres, sewing it more neatly then, and careful not to cut the supporting braces formed by the nerves of the leaf. Then it rubbed the interior of the case with its head, as if to smooth it, and presently began to darken it with a web of fine silk, rendering further operations invisible, only I preceived that one end was left open," * * * "and that the fibres were cut mysteriously away, when the tent, by powerful muscular action, was raised from the leaf, and the Coleophora marched off to refresh himself in a new excavation." (Int. Obs., vol. IV, p. 4.)

In Europe the Coleophoræ are met with at every turn, on the heath of the commons, on the elms in the green lanes, on the plants by the way-side. They look like moving atoms of the plants they feed on; and they have the power of throwing themselves strangely into position to deceive the over curious eye.

Of the case-bearers of this continent, the apple-tree case-bearer (*Coleophora malivorella*, Riley) is an interesting example. The larva of this insect feeds upon the buds and leaves of the apple tree. The case it constructs for itself is curved like the handle of a pistol. The moth appears in July. It is mottled, brown and white, and is about half-an-inch in expanse of wings. The young larva feeds on the under side of the leaves, until the frost comes; then it fastens its case to a twig, making itself comfortable for the winter; in spring it feeds up upon the buds of the tree, and in June it goes into chrysalis.

The basket-worms of the Southern States are instances also of creatures that construct coverings for themselves. *Thyridopteryx ephemeræformis* (Haworth) is found on a variety of trees. The young larvæ appear in May. Each of them forms a case of pieces of the leaves it feeds upon, held together by a silken web. As it increases in size it enlarges its covering, till at length it hangs like a small purse or bag. When about to undergo the pupal change the insect fastens its case to a twig. The female moth is apterous. After she has been impregnated she retires into her case to lay her eggs; having laid them she falls to the ground and perishes. The male is black, and has transparent wings.

Platœceticus Gloveri (Packard) in its habits closely resembles the insect just described. It is found in Florida, feeding upon the orange and the fig. The female moth is light-coloured, and apterous. The male is an elegant little creature, with feathered antennæ, and is of a dark-brown hue.

The larvæ of some insects belonging to the genus *Incurvaria* have the habit of constructing flat cases for themselves. *Incurvaria acerifoliella* (Haworth) is one of the insects that, of late years, have worked their way northward from the United States. It did not come under my observation until the year 1881. In that year and in the following it was exceedingly abundant. In the county of Missisquoi the leaves throughout extensive maple woods were so skeletonized by it, that they presented a scorched appearance that was very remarkable. Looking at the groves from a short distance one might have thought that a hot blast had passed over the country, or that autumn had come before its time, and had browned, instead of crimsoning, the maple leaves.

The Acerifoliella larva bites, from the leaves, discs, about two-eights of an inch or three-eights of an inch in diameter. It joins several of these together, and takes up its domicile within. When it feeds, it thrusts out its head and fore-legs, and then eats the parenchyma of the leaf away, working systematically from a centre. When full fed it finds its way to the ground, and turns to a pupa within its leafy covering. The perfect insect has glossy blue fore wings; the hind wings are brown, shot with purple; the head is decorated with a tuft of yellow hairs. In the years mentioned, clouds of these beautiful little moths would rise from the foliage shaken by the passers-by.

We cannot but admire the instinct, which, in every case, impels the larva to form a covering so well adapted to secure the possessor's comfort through the vicissitudes of the seasons, and, at the same time, so likely, by its resemblance to surrounding objects, to prevent attacks from insectivorous creatures.

REMEDIES FOR NOXIOUS INSECTS.

BY THE REV. C. J. S. BETHUNE, M.A., D.C.L., PORT HOPE.

For the convenience of farmers and fruit-growers, I propose in this paper to set forth, in alphabetical order, under the popular names of the insects, the remedies that have been found by practical experience the most useful in counteracting their ravages. As far as possible, I shall also give a wood cut of the insect, so that all may know what particular enemy is referred to. In many instances the remedies are familiar and in general use, but I think it desirable to insert them in order to make the list as nearly complete as possible. Free use is, of course, made of the writings of our leading economic entomologists, such as Professor Riley, Chief of the United States Entomological Commission at Washington; Dr. Lintner, State Entomologist of New York; and Professor Saunders, of London, whose name is familiar to all our readers, and whose work on *Insects Injurious to Fruits* should be in the hands of every intelligent farmer and fruit-grower in Canada.

APHIS, OR PLANT-LOUSE.

It may almost be said of this familiar pest that there are as many varieties of plant lice as there are species of plants in the world; nearly every form of vegetable life

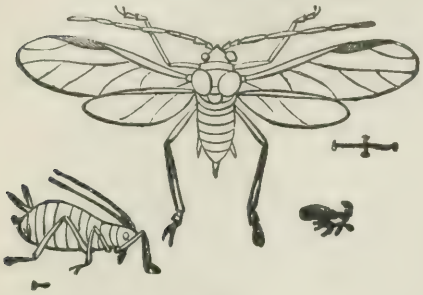


Fig. 29A.

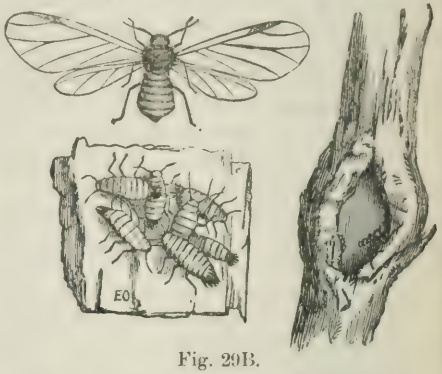


Fig. 29B.

has its own Aphis to suck its juices and to impair its vitality. It would, therefore, be an endless task to attempt to enumerate all the different kinds of Aphis that are to be met with and fought against; the same remedies, however, will apply with almost equal efficacy in all cases, allowance being made for the difference of application requisite in treating, for instance, an apple tree and a wheat plant, a hop vine and a window flower. The illustration (Fig. 29A) given herewith represents a highly magnified winged male and wingless female of the plant-louse attacking the apple (*Aphis mali*, Fabr.); the species infesting other plants are very similar, varying chiefly in colour from pale green to deep black. Fig. 29B represents the winged form of the woolly Plant-Louse of the apple, a group of the larvæ, and a twig perforated by the insect.

The ordinary remedies for this pest are (1) watering the infested plants with strong soap-suds, or a decoction of coarse tobacco; (2) dusting with lime or sulphur; (3) exposing them to the fumes of strong tobacco. The first remedy is applicable to most cases, and the third only to plants in pots, or those sufficiently small to be covered over while undergoing fumigation.

Many experiments have recently been made both in England and the United States, for the purpose of finding out a cheap and thoroughly effective remedy against this and other insect pests. Coal oil (or kerosene) is so cheap, so universally an article of domestic consumption, and so deadly to all insect life, that experiments have been especially directed towards its employment as an insecticide. The great difficulties to be overcome are its destructiveness to vegetation, when applied undiluted, and the almost impossibility of diluting it, beyond a mere mixing of a momentary character with water or other liquid. These difficulties have, however, been at last solved by means of "emulsions." One of these, recommended by the United States Department of Agriculture, is made as follows:—

"Take of refined kerosene (coal oil) two parts, and of sour milk one part. Mix in a pail, or tub, by continuous pumping with a force-pump back into the same vessel through the flexible hose and spray nozzle. After passing once or twice through the pump the liquids unite and form a creamy emulsion, in which finely divided particles of oil can be plainly detected. Continue the pumping until the liquid curdles into a white and glistening butter, perfectly homogeneous in texture, and stable. The time required for producing this butter varies with the temperature. At 60° it will be from one-half to three-quarters of an hour; at 75°, fifteen minutes; and the process may be still more facilitated by treating the milk up to, but not beyond, the boiling point.

"Upon standing for a day or two the milk (if sweet has been used) will curdle, but it only requires to be stirred, not churned again, to bring it back to its former smoothness. But if sour milk is used no fermentation ensues, and if not exposed to the air the butter can be kept unchanged for any length of time.

"When needed for use, the butter will mix readily with any proportion of water, if first thinned with a small quantity of the liquid." In using the emulsion for killing plant lice, or other insects, care should be taken to dilute it at least twelve or sixteen times with water and then try the effect on a small portion of the infested plant; if it is found to injure the foliage, then dilute still further. One pint of the butter will usually suffice for two gallons of water. Dilute only as needed for immediate use. The cost of this article, which is very effective, is exceedingly trifling.

Another emulsion is made with coal oil and soap instead of milk. When a moderate quantity is required, take two gallons of coal oil, half a pound of common bar soap, soft soap, or whale-oil soap, and one gallon of water. Dissolve the soap in the water, and add it boiling hot to the coal oil. Churn the mixture, as before, by means of force-pump and spray nozzle, for five or ten minutes. The emulsion, if perfect, forms a cream, which thickens on cooling, and should adhere without oiliness to the surface of glass. Dilute before using, one part of the emulsion to nine parts of cold water. The three gallons of emulsion thus made produce, when diluted, thirty gallons of wash at a cost of about one cent per gallon.

These emulsions have been found thoroughly effective remedies, not only for plant lice, but also for many other insects. They can be used in the field, hop-yard or orchard on a large scale, and in the garden with equal efficiency. In England, similar washes have been applied to hop-yards for the destruction of the Aphis by the aid of steam power.

Apple Tree Borers.

There are two beetles whose larvæ are especially injurious to young apple trees; they are familarly known as the flat-headed and round-headed borers, from the shape of the grubs. The former belongs to the family Buprestidæ, and is a common insect all over North America. Its scientific name is *Chrysobothris femorata*, Fabr; the annexed wood-cut represents the grub and the perfect insect. It does but little noticeable harm to healthy full-grown trees, but is often very destructive to young, freshly transplanted, or sickly trees. The presence of the borer within the trees may often be detected by the discoloration of the bark over the spot where it is at work, the cavity beneath causing a dried and flattened appearance, and also by the presence of its sawdust-like castings, or the exudation of sap. In such cases, the simplest remedy is to cut out the grub with a knife, or destroy it by means of the insertion of a stiff wire.

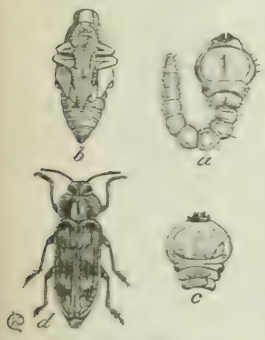


Fig. 30.

The best preventive remedy for this insect, so far as known at present, is a wash made of soft-soap and carbolic acid. Soft-soap and lime, with a little dissolved glue added to cause adherence, is also recommended; or soft-soap reduced to the consistency of a thick paint by the addition of a strong solution of washing soda in water. Any of these washes, to be effective, must be applied to the branches and twigs as far as practicable, as well as to the trunks of the trees, for this borer does not confine its work to any particular part. The application of the wash should be made in May, and again in early July and late August, in order to prevent the deposit of eggs by the female beetle. A gentleman (quoted by Professor Riley), who has had much experience with this beetle in the West, states that he has taken as many as a hundred borers from one small tree, and advises that "those having trees subject to attacks should look over them every week if possible, or every two weeks at least, from the first of June to the fall, for exudation of sap from the bark, which is a sure indication of their presence. When noticed, the borer may be destroyed by cleanly cutting out a small slice of the bark." This method involves great labour, but it is worth doing in the case of a young orchard that is found to be infested by this creature. The writer just referred to states that "carelessness in this respect the past season has cost me more than three hundred trees, all young."

The round-headed apple tree borer (*Saperda Candida*, Fabr., Fig. 31*c*) is not nearly so common as the species just referred to. It is found in the Niagara district and other parts of

the western peninsula of Ontario, but I have never met with it north of the lake or east of Toronto. The beetle can be at once recognized by the two creamy-white stripes running the whole length of its brown body, while the grub (Fig. 31*a*), may be distinguished from the other species by its round, chestnut-brown and shiny head and thick body. For a full description of the insect and its habits, the reader is referred to Saunders' "Insects Injurious to Fruits." The remedies to be employed in warding off the attacks, or destroying this insect, are the same as those given above for the flat-headed borer; it should be noticed, however, that the work of this creature is almost entirely confined to the base of the tree, near the ground, and therefore it can be more easily detected and dealt with. A sure indication of its presence is afforded by the castings which, when first discharged, "look as if they had been forced through barrels of a minute double-barreled gun, being arranged closely together in two parallel strings." When observed, a sure remedy may be found in cutting out with a knife, or probing the burrow with a wire.

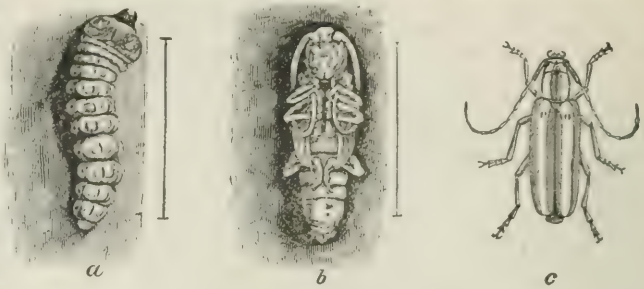


Fig. 31.

Apple-root Plant-louse.

This insect (*Schizoneura lanigera*, Hausm.) has two forms, in one of which it attacks the branches of the apple tree; in the other it works under ground upon the roots. In the former character it seldom does much damage, but, if troublesome, it can be got rid of by the vigorous use of a stiff brush wet with one of the solutions referred to for use against borers. It may be at once recognized by its habit of living in clusters covered with woolly down.

Fig. 32.

The underground form is represented in the accompanying wood-cut, fig. 4; *a* represents a root covered with knots caused by this insect; *b* a wingless louse, shewing the blueish-white cottony substance with which it is covered, and *c* a winged specimen. It attacks the tender roots, sucking their juices, and weakening, oftentimes seriously, the life of the tree. When an apple tree is found to be sickly without any evident cause, the presence of this insect may be suspected. The tree should then be dug about, and the earth removed from the roots in order to see whether they are knotted as in the figure, which would indicate the work of the louse.

The simplest remedy, when the roots are uncovered and the lice are brought to view, is to scald them with hot water, nearly boiling, or to drench them with strong soap-suds.

For the use of coal oil against this and other underground pests, such as the grape Phylloxera, etc., a plan has been devised by Dr. Barnard, of Washington, D. C., that seems to be effective. The great difficulty hitherto in the use of coal oil for root insects has been its application on, or just beneath, the surface of the ground, and close to or above the roots; when applied in this way its contact with the roots themselves and their consequent destruction can hardly be avoided. Dr. Barnard employs what he calls a "nether inserter," which is thus described (*Psyche*, vol. iv, p. 134): "It consists of a tube which is made to fit closely around a central solid shaft somewhat longer than the tube and pointed at its lower end. The tube may have an internal diameter of 15 mm. (about half an inch) and the shaft a diameter of 12 mm. The upper end of the tube expands like a bowl. The upper portion of the shaft is weighted with a heavy ball so disposed

that the shaft can be grasped above the ball. By withdrawing the shaft partially from the tube and then returning it with force, as the lower end of the tube rests on the ground, both tube and shaft can be driven into the ground to any required depth. The shaft is then wholly withdrawn and the insecticide poured into the tube, by which means it is placed beneath the roots without coming into contact with them. The tube is then withdrawn and the hole made by it filled up with earth. The insecticide (coal oil, or whatever may be used) being volatile, rises through the ground and becomes diffused. In a later communication to the same journal (*Psyche*, iv., 143), Dr. Barnard speaks of the effective use of this instrument against the grape Phylloxera, and states that the same treatment applies in the case of all other root insects or subterranean pests, mentioning among others the insect now before us, the apple-root plant-louse, or American Blight-Aphis, as it is sometimes called. The great point in the application of this remedy is evidently the distribution of the coal oil, or other insecticide, beneath and beyond the danger of contact with the roots, the destruction of the insect pest being caused by the passage upwards to the surface of the vapour of the petroleum.

The Army Worm.

Almost any caterpillar that appears in large numbers and covers a wide area of country is locally called "The Army Worm," but the species to which the name properly belongs from its habit of devastating whole fields at a time, marching on in regular column to fresh pastures and devouring all green things as it goes, is the *Leucania unipuncta*, Haw. Fig. 33 represents the caterpillar in the attitude of eating, and fig. 34 the moth.

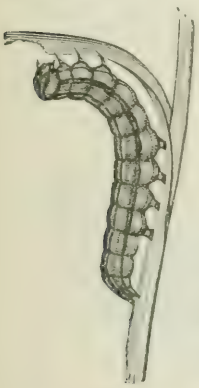


Fig. 33.

Fig. 34.

This insect may be found every summer in small numbers, and so far has seldom appeared in destructive hosts in Canada. The best and simplest remedy for it is to apply Paris green copiously to the fields where it abounds, or, when it has commenced its march, to broad strips of meadow immediately in front of its main body, taking care to plow under the poisoned surface as soon as the remedy has done its work. The moth, which appears towards the end of summer (we have taken it this year late in October), can easily be captured by hundreds by the process of "sugaring," that is by spreading a mixture of coarse sugar and stale beer on fence boards and trees at dusk, and visiting the bait with a lantern during the night.

Bark Lice.

There are two or three kinds of bark lice injurious to fruit trees, but the species that is most common and destructive in Canada is that represented in the adjoining wood-cuts (Fig. 35A and 35B), and known from its shape as the oyster-shell bark louse (*Mytilaspis pomorum*, Bouché). To get rid of this pest, which if let alone will soon cover the bark of the whole tree from top to bottom, two or three operations are necessary: first, during the winter or in early spring examine the orchard and scrape the scales off every infested tree as far as they can possibly be reached; but as the scales will be found on the smaller branches and twigs which cannot be got at, the insect must be further fought at the time when the eggs are hatching

Fig. 35A.

Fig. 35B.

and the young lice are crawling over the limbs; this takes place about the end of May or early in June, according to the season. As soon as observed, the twigs where the young lice appear, should be brushed with a strong solution of soft-soap and washing soda, or showered with a solution of washing soda in water, made by dissolving half a pound or more in a pailful of water. The emulsions mentioned for use against the Aphis may also be employed with effect.

The Bean Weevil.

Fig. 36.

This insect, *Bruchus obsoletus* Say (*B. Fabæ*, Riley), is often exceedingly injurious to bean crops, especially in the neighbouring state of New York. The wood cut, Fig. 36, represents the tiny beetle life size, and *a* highly magnified; *b*, an infested bean from which the insects have emerged.

In order to get rid of this pest, seed beans intended for next year's sowing should be carefully examined in the autumn or winter, and if found to be infested by the insect, should be placed in tight boxes—tins would be the best—in a very warm place. In a very short time, the heat will cause the creature to complete its transformations and come out of the bean: it can then be easily killed by dipping in hot water, or left to die; the beans, if not badly perforated, may then be safely used for sowing the next spring.

Another method, similar in its character, is to keep the beans in tight vessels in a dry place over one year before sowing; by doing so, the beetles will come out and die during the first summer and leave the seeds in good order for the following year. There is, of course, some danger of a failure to germinate, if kept so long in a warm and dry place. Dipping for a few moments in very hot water just before sowing may also be employed as a remedy.

Cabbage Butterflies.

Fig. 37.

Fig. 38.

There are three white butterflies whose caterpillars feed on the cabbage, all belonging to the same genus *Pieris*, but the only one whose injuries are serious is the imported species, *P. rapæ*, Linn. Fig. 37 represents the male butterfly; Fig. 38 the female; and Fig. 39, *a*, the caterpillar, and *b*, the chrysalis. As this has become of late years one of our commonest butterflies, every one is no doubt familiar with it; and every gardener must know equally well the green caterpillar, clinging closely to leaf or stem, and resembling so nearly the colour of the plant, whether cabbage, cauliflower or mignonette, as to be scarcely distinguishable without close searching.

Fig 39.

It is difficult to apply remedies for this pest as the caterpillar feeds within the folds of the leaves, and any poisonous preparation applied for its destruction is liable to remain within the cabbage and render it unfit for food. This is certainly the case with violent poisons, such as Paris green or hellebore; but the "Persian insect powder," made from the flowers of the *Pyrethrum*, may be used with good effect. It should be dusted freely on the infested plants, or mixed with water and poured or syringed into them. While destructive to most insect life, this remedy is quite harmless to man, and in any case can be pretty well removed by washing before the vegetable is cooked. It has been found at the New

York Agricultural Experiment Station, that a mixture of one part of powdered Pyrethrum, with three parts of plaster or air-slacked lime is quite effective in destroying this insect. It is applied with a small bellows, by inserting the nozzle among the leaves, so that the powder is driven through the plant. Another mixture, cheaper than the foregoing, is one part of the powder to twenty of flour, applied in the same way; experiments with this showed that the caterpillars were killed by it in twelve hours.

A still cheaper remedy, and one more quickly applied, is the following:—Dilute one table-spoonful of the cheapest black carbolic acid in one gallon of water, apply sparingly after heavy rains, and at intervals of three or four weeks, if the caterpillars are observed. It is said by those who have tested it, to give them uninjured crops of cabbage.

Cabbage Moths.

The caterpillars of two kinds of moths, are also injurious to the cabbage and allied plants. One of these, the Cabbage Plusia, *P. brassicae*, Riley, has of late years become increasingly destructive in some of the neighbouring States, and is also found in this Province. Fig. 40, *a* represents the larva, *b* the chrysalis, and *c* the perfect insect. The caterpillar is pale green, lined with white, and has a few scattered black hairs rising from small white spots; when walking it loops its body in a peculiar manner, as shown in the cut. The moth, which is dark gray, almost brown, is especially distinguished by the silvery spots on the forewings.

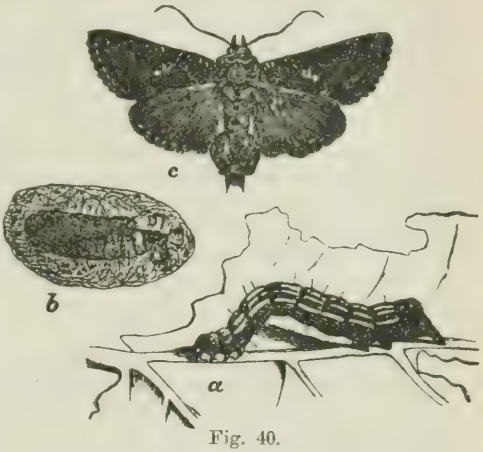


Fig. 40.

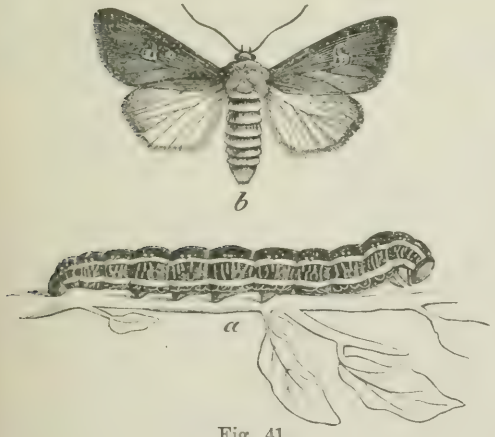


Fig. 41.

The other cabbage moth is represented in Fig. 41, in both stages of caterpillar and perfect insect. It is known as the Zebra, *Mamestra picta*, Harris, from the peculiar markings, which render the caterpillar quite handsome.

As the larvæ of both these moths feed for the most part on the outside of the plants they infest, they may often be kept in check without difficulty by hand picking. They may also be destroyed by sprinking the plants with hot water a little below the boiling point. The Pyrethrum insect powder may be employed as well; a tablespoonful thoroughly mixed through two gallons of water and sprinkled over the plants, is said to be effective in destroying the caterpillars.

Canker Worms.

There are two species of insects whose caterpillars are commonly known as canker worms; the moths of one species, *Anisopteryx pometaria*, Harris, appear chiefly in the autumn, those of the other, *A. vernata*, Peck, partly in the autumn, but most abundantly in the spring. They resemble each other very much in appearance, and possess the same habits; the remedies to be employed against them are therefore the same in both cases.

Fig. 42, represents the Fall Canker worm, as it is termed; *a* the male moth, *b* the female, natural size, *c* joints of female antenna, *d* one joint of female abdomen, magnified. The resemblance between the two species will be observed by comparing the above with

Fig. 42.

Fig. 43.

Fig. 43, which represents the Spring Canker worm; the letters have the same references, with the addition of *e*, the ovipositor of the female, magnified. The worms themselves are geometers, or loopers, that is, they alternately loop up and extend their bodies when walking. If disturbed, and also when fully grown, they let themselves down from the branches of the trees by silken threads. They especially infest the apple tree and elm, but are also known to attack the cherry, plum, linden and other trees. They are usually confined to small localities and do not spread with any rapidity, owing to the wingless female being incapable of flight, or travelling to any great distance. Remedies may, therefore, be successfully applied where they are found, as there is little danger of a fresh invasion when one colony is exterminated.

The most effective remedies against this insect are those based upon the habits of the moth. As the female has no wings, it is obliged, in order to lay its eggs, to climb up the tree from the ground where it passes its pupa state. It is evident, then, that if she can be prevented from doing so, there will be no new brood of worms. One of the simplest modes of accomplishing this, which has been successfully employed for many years, is to encircle the trunk of the tree a short distance above the ground with a band of cloth or of thick paper, folded to a width of four or five inches, and covered with tar or a mixture of tar and molasses. The bandage must be tightly tacked to the tree on the lower edge to prevent any of the insects from creeping under it, and the ring of tar must be renewed every few days to prevent its becoming too hard to stop the moths from crossing it. Care must also be taken to keep the tar sticky during cool evenings, for the moth is nocturnal in its habits; for this purpose it is well to mix with it some raw oil or molasses. The bandages must be applied in the latter part of October, and kept on till the leaves are expanded the following spring; it is also necessary to look to them during any mild weather in the winter. Tin, lead and wooden troughs, filled with oil, have also been used to encircle the trunks of the trees, with the same object in view, but the tar bandages are the simplest, cheapest, and most effective if attended to.

Another kind of remedy consists of collars of tin or other material, fastened round the tree and sloping downwards like an inverted funnel. These are employed to prevent the moths from ascending the tree, as the insect will climb up as far as it can, and then travel round and round beneath the protector till it becomes exhausted and falls to the ground. The eggs, however, will, in such cases, be deposited in large numbers beneath the obstruction, and unless they are brushed off and destroyed the tiny young worms will manage to crawl through any crevice and get to the foliage above.

Should the moths succeed, through oversight or neglect, in getting up the trees and depositing their eggs, and thus produce a swarm of the caterpillars upon the foliage, it will be necessary to resort to other measures for the destruction of the pest. The simplest and most effective is to spray the trees by means of a force-pump with a mixture of Paris green, or London purple, and water. This may be done with safety upon apple trees so early in the season as the time when the canker worm is prevalent.

The Chinch Bug.

This terribly destructive insect has happily given us no trouble in Canada as yet, though a few specimens have from time to time been found by Entomologists. But it has

come so very near to us that it is well to be on our guard against it, and to know how to repel its attacks in case of necessity. Dr. Lintner, in his Report for last year, gives an account of its appearance in large numbers, and of the damage it inflicted on several farms in St. Lawrence county, New York, at Morristown, opposite Brockville, and other places near the river further west. During the seasons of 1882 and 1883 it was abundant and destructive, but was afterwards apparently killed out, partly by the measures taken to exterminate it, and partly by the unfavourable weather.

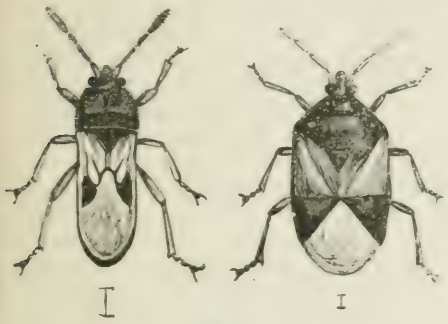


Fig 44.

The chinch bug (*Blissus leucopterus*, Say) is a very tiny creature, and not likely to be recognized by any one unfamiliar with insects. The annexed wood cut (Fig. 44) represents the creature highly magnified on the left, the hair line beneath shewing the actual size; the figure to the right represents an ordinary bug, shewing the difference in shape from the chinch bug. Should any farmer observe in the autumn patches of dead grass in his meadows, looking as if winter-killed, and on inspection find minute insects at the roots smelling like ordinary bed bugs, he will do well to send some specimens at once to a competent entomologist for identification (Mr. James Fletcher, Department of Agriculture, Ottawa, is the proper person to apply to). If it should prove to be the chinch bug, the following remedies may be employed:—

1. Burn the dead grass on the infested spot and fifteen or twenty feet around it. This may be done by spreading over it a covering of straw and setting fire to it when the wind is favourable. 2. Plough the burned area, or, better still, the whole field, in broad and deep furrows, turning the sod completely and flatly over, not permitting it to be in ridges. 3. To insure the more effective burying of the insects that may be feeding upon, or preparing to pass the winter among the roots of the grasses, harrow the ploughed surface slightly and follow with a heavy rolling. 4. If it can be obtained, spread gas-lime over the infested parts at the rate of 200 bushels to the acre. It should only be applied to the parts of the meadow actually attacked, as when fresh it will kill the grass.

Clover Insects.

Between twenty and thirty insects are known to entomologists as more or less injurious to clover in Canada, while many more are found in the United States. The most important of these—seven in number—have been so fully and satisfactorily described and illustrated by Mr. Saunders, in a late issue of these reports (12th Annual Report of the Entomological Society of Ontario, 1881, pages 37 to 48), that I need only refer the reader to his paper, and not attempt to repeat the matter here. The Clover Seed Midge is also referred to by Mr. James Fletcher, in his report for 1885, to the Minister of Agriculture at Ottawa (pages 12 and 13); the remedy that he has found most effective in Ontario, where this tiny insect has proved very injurious where clover is grown for seed, he gives as follows:—

"The only instances where any seed has been reaped are where, instead of allowing the clover to stand in the field till the end of June, it has been fed off by cattle and sheep till the beginning or middle of June, and then left to go to seed for the autumn crop. . . . The verdict of all the growers who have tried the experiment now seems to be that two crops cannot be secured, and to get any seed at all the first crop must be pastured until the beginning, and not later than the middle, of June. In this way the minute larvæ of the flies, which are to lay the eggs for the second brood, are eaten by the cattle at the same time as the clover and destroyed. It is quite apparent that, if all persons will adopt this plan, much good will be done, and if some fall dressing for the land can be devised to destroy the hibernating brood, we may hope before long to get rid of this injurious insect."

The Codling Worm.

Every fruit-grower is, of course, perfectly familiar with this destructive and most troublesome insect. It is wide spread over the whole Dominion from Nova Scotia to British Columbia, and destroys every year a large proportion of the crop. The accompanying wood cut (Fig. 45) illustrates its mode of burrowing into the fruit of the apple.

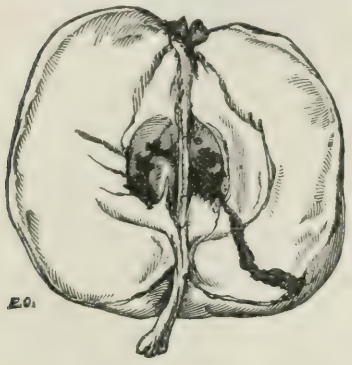


Fig. 45.

For a long time it was supposed that the only satisfactory remedy for this pest was to entrap the worms, when about to change to the pupa state, by means of bandages of carpet, cloth, or sacking tied around the trunks of the trees during the months of June, July and August. These bandages require to be removed every few days and passed through an ordinary laundry "wringer" in order to kill all worms or pupæ that may be attached to them, and then replaced on the trees. In a large orchard this plan involves an immense deal of continuous labour. Happily, it has recently been discovered that the insect may be kept under control far more easily and effectively by the use of Paris green. A very small quantity of the poison diluted in water—some experimenters say as little as a table-spoonful in a barrel of water is sufficient—should be sprayed upon the trees as soon as the blossoms have well passed maturity, and before the young fruit has turned down from its increasing weight. Animals should, of course, be kept away from the orchard till after heavy rains have removed any danger to them from the poison. This remedy is supposed to operate in two ways—first, by killing the young worms that consume what may be attached to a blossom, and, secondly, by causing the parent moth to abstain from laying her eggs on trees that have been so treated. However this may be, we are informed that the remedy is most effective, and we strongly recommend our readers to try it during the coming season.

These notes on "remedies" have extended to so much greater length than the writer anticipated that he must defer the continuation of them to another year, by which time he hopes to be able to give the results of further experiments made with reference to many more of our most obnoxious insects.

RETURN

To an Order of the Legislative Assembly made on the 16th day of March, 1887, for a Return shewing the Agreement entered into between the Province and the Roman Catholic Episcopal Corporation of the Diocese of Kingston for the use of the Buildings known as Regiopolis College, and the amount expended for repairs, and improvements made at the expense of the Province upon the Building.

By Command,

A. S. HARDY,
Secretary.

Provincial Secretary's Office.
Toronto, April 22nd, 1887.

(*Mr. Meredith.*)

RETURN SHEWING THE AGREEMENT ENTERED INTO BETWEEN THE PROVINCE AND THE ROMAN CATHOLIC EPISCOPAL CORPORATION OF KINGSTON FOR THE USE OF REGIOPOLIS COLLEGE BUILDING AND THE AMOUNT EXPENDED FOR REPAIRS AND IMPROVEMENTS THEREON.

THIS INDENTURE, made the tenth day of March, A.D. one thousand eight hundred and eighty-six, in pursuance of the Act respecting Short Forms of Lease,

BETWEEN

The College of Regiopolis, of the City of Kingston, hereinafter called the Lessors,

Of the First Part;

AND

Her Majesty Queen Victoria, represented by the Inspector of Prisons and Public Charities, hereinafter called the Lessee,

Of the Second Part.

Witnesseth, that in consideration of the rent, covenants and conditions hereinafter respectively reserved and contained by the said Lessee, her successors and assigns, to be respectively paid, observed and performed, the said Lessors hath demised and leased, and by these presents doth demise and lease unto the said Lessee all that messuage and tenement known as Regiopolis College in the City of Kingston, together with the yard and outbuildings belonging thereto and the garden in front thereof, and being all the property of the Lessors lying between the stone wall west of the College Building and Bagot Street, together with all the rights, members and appurtenances whatsoever to the said premises belonging or appertaining, to have and to hold the said hereby demised premises with their appurtenances unto the said Lessee, her successors and assigns, for the term of five years, from the first day of September, A.D. one thousand eight hundred and eighty-five, with the privilege or option to the Lessee, her successors or assigns, of holding the premises for the further period of six months from the expiration of said five years, upon condition of payment for said six months as hereinafter provided, the said Lessee yielding and paying therefor the cash payment of fifteen hundred dollars on or before the first day of April next, and should the said Lessee hold the premises for the said further period of six months, then yielding and paying therefor the cash payment of twelve hundred dollars at the expiration of said six months, and the said Lessee doing the improvements and repairs hereinafter covenanted by her to be done.

The said Lessee, her successors and assigns, hereby covenant and agree with the said Lessors, their successors and assigns, that she will pay the said sum when due and will put the premises in the necessary state of repairs for use as a Branch Asylum for the Insane, and in so doing will have said premises fitted up to be heated with hot water, and will have baths and water-closets put in said building, and will have other repairs done to said building and to the out-buildings and fences according to plans and specifications prepared under the directions of the Department of Public Works for the Province of Ontario, at an estimated cost in the whole of about ten thousand five hundred dollars, and she further covenants and agrees that at the expiration of the said tenancy the whole of the improvements to said buildings and premises shall belong to and be the property of the said Lessors, the Lessee being at liberty, however, to remove all the furniture and property not belonging to said building and premises.

That the said Lessee covenants with said Lessor to pay taxes.

And that said Lessee will not assign or sublet without leave, and further the Lessee will, at the expiration or other sooner determination of said term of five years, or if

possession of said premises shall be kept by her successors or assigns for said further term of six months, then at the end thereof peaceably surrender and yield up unto the said Lessors the said premises hereby demised, with the appurtenance, together with all buildings, outhouses, erections, fixtures, fences, apparatus for supplying heat and water, baths, gas fixtures, water-closets, and all other repairs and improvements now at the date of this lease, or hereafter to be built or erected on said premises, or placed in said buildings, if they are then in existence.

And will insure and keep insured the said buildings and fixtures for the benefit of the Lessors for the sum of sixteen thousand dollars.

Proviso, for re-entry by the said Lessors on non-payment of rent, or non-performance of covenants.

The said Lessors covenant with the said Lessee for quiet enjoyment.

In witness whereof the said parties hereto have signed and affixed their seals.

Signed, sealed and delivered in the presence of

DENIS A. TWOMEY, Priest.
JOSEPH J. MCGRATH, Priest.

JAMES VINCENT CLEARY,
Bishop of Kingston, on behalf of the College of Regiopolis in the City of Kingston.

HARRY HAYES.

W. F. O'REILLY,
Inspector Prisons and Public Charities.

RETURN shewing the amount expended for repairs and improvements at the Kingston Branch Asylum (Regiopolis College), to the 31st of December, 1886.

YEAR.	TO WHOM PAID.	PARTICULARS.	AMOUNT.
1885	Noon and Tyner	Lumber	$250 28
"	Lewis Bros.	Hardware, etc	71 08
"	Pay list of men	Work refitting building	140 38
"	S. G. O'Grady	Paymaster's expenses.	12 50
"	Pay list	Work at building	322 16
"	Pay list	" "	418 50
"	T. M. Hennessy	Travelling expenses	12 90
"	Hon. C. F. Fraser	" "	15 00
"	S. G. Kilpatrick	Pipes, etc.	76 46
"	Pay list	Work at building	483 94
"	S. G. O'Grady	Expenses, Paymaster	10 15
"	Pay list	Work at building	483 90
"	S. G. O'Grady	Expenses, Paymaster	10 35
	Martin Strachan & Son	Lumber	191 68
"	Lewis Bros.	Hardware	218 92
"	Noon and Tyner	Lumber	526 63
"	Metallic Roofing Co.	Roofing Boiler-house, etc	172 98
"	Isaac Newlands	Masons, labour, material, etc.	1,593 85
"	The Rathbun Co	Shingles	36 70
"	Noon and Tyner	Lumber	29 92
"	Robinson Bros.	Painting	709 00
"	Lewis Bros.	Hardware, etc	193 73
"	Lewis Bros.	"	75 54
"	Pay list	Work at building	280 77
"	W. Flynn	Tinsmithing	90 45
	Carried forward		$6,427 77

RETURN shewing the amount expended, etc.—(*Continued*).

YEAR.	TO WHOM PAID.	PARTICULARS.	AMOUNT.
	Brought forward		$6,427 77
1885	A. Strachan	Hardware	1 28
"	S. Shaw	Cartage	15 00
"	M. Wilson	Expenses travelling	15 75
"	Pay list	Work at building	350 94
"	Wm. Cockburn & Son	Blacksmithing	18 67
"	Patrick Fenning	Cartage	1 50
"	E. Glazier	"	1 25
"	B. O'Byrne	Sundry disbursements	20 00
"	S. G. O'Grady	Expenses, Paymaster	11 05
"	Pay list	Work at building	55 50
"	Isaac Newlands	Material and labour	300 74
1886	Robinson Bros	Painting, etc.	32 76
"	McKelvey and Birch	Heating apparatus and plumbing	6,858 72
"	The Rathbun Co	Fencing	783 27
"	The Rathbun Co	Lumber	53 99
"	McKelvey and Birch	Plumbing, etc	43 20
"	James Reed	Bureaus	28 00
"	M. & C. Loftus	To pay tenant in possession	1,500 00
	Total		16,519 39

J. P. EDWARDS,
Accountant, etc., Public Works Department.

DEPARTMENT PUBLIC WORKS, ONTARIO,
TORONTO, March, 1887.

FOURTH ANNUAL REPORT

Of the Inspector of Legal Offices for the year 1886. Presented to the Legislative Assembly.

By Command,

A. S. HARDY,
Provincial Secretary.

PROVINCIAL SECRETARY'S OFFICE,
TORONTO, 22nd April, 1887.

FOURTH ANNUAL REPORT

OF THE

INSPECTOR OF LEGAL OFFICES.

THE HONOURABLE OLIVER MOWAT,

Attorney-General of Ontario.

SIR,—I have the honour to present this, my Fourth Annual Report, on the inspection of the Public Legal Offices throughout the Province for the year ending 31st December, 1886.

The number of offices inspected by me during the year was 243, that is to say, the offices of 40 Sheriffs, 38 Local Masters, 15 Deputy Registrars, 24 Local Registrars, 25 Surrogate Registrars, 25 County Court Clerks, 38 County Crown Attorneys and 38 Clerks of the Peace.

The following officers have died during the year, namely :—

Sheriffs—Hon. Peter Gow and J. A. Woodruff, Esq., Sheriffs of the Counties of Wellington and Lincoln respectively.

County Attorneys—F. Fenton, Esq., and James Staunton, Esq., County Attorneys of the Counties of York and Elgin respectively, the latter gentleman being also Clerk of the Peace for the County of Elgin ; he has been succeeded by D. J. O'Donohue, Esq.

A vacancy occurred in the office of Deputy Registrar of the Chancery Division of the High Court of Justice at Peterborough by the appointment of C. A. Weller, Esquire, as Judge of the County Court of the County of Peterborough. The position was filled by Mr. John Moloney, Deputy Clerk of the Crown, becoming Local Registrar by virtue of *The Judicature Act.*

SHERIFFS' OFFICES.

These offices I found conducted, with a very few exceptions, satisfactorily, the duties being performed by the Sheriffs more efficiently, and the books of office kept in a more intelligent and careful manner than formerly.

However, in these exceptional cases I found, notwithstanding my instructions, that that execution monies received were not entered in the Cash Book, nor in the *Fi. Fa.* or Execution Book ; nor were such monies in some instances paid over as promptly as they should be. Such irregularities were most frequent in cases coming under *The Creditor's Relief Act.* In a number of these cases I found that certificates issued under the Act and received by the Sheriffs were not entered in the *Fi. Fa.* or Execution Book as required by section 7 sub-section 9 of the Act, although they bound both lands and

goods of the debtor. I pointed out the great risk Sheriffs, who omitted making such entries, were incurring, and gave instructions to have all proper entries made.

I was under the impression that my instructions regarding overcharging would have prevented its recurrence, but I found that in three or four instances such instructions were not carried out. Besides those mentioned in my former Reports I found in the instances referred to other overcharges made.

The following are instances of such overcharges : Charging auctioneer's fees for selling goods, besides the regular poundage ; charging the hire of a team going to sell, in addition to the regular mileage ; one writ of summons served upon two defendants, charged for as two separate writs ; charging the fees for receiving, filing, and returning, *fi. fa.* lands against the debtor where amount of execution was made under the *fi. fa.* goods ; charging writ of summons and statement of claim annexed as separate services, etc. ; charging letter returning writ besides the fee for return ; charging the return of a subpœna and affidavit of service of County Court writ, neither being chargeable.

I also found instances where, under *The Creditor's Relief Act*, two or more executions being in a Sheriff's hands, he charged not only the proper fees for receiving, filing, and returning each writ, but incorrectly charged for warrant, mileage to seize, schedule, notices of sale, and mileage to sell under each writ in his hands. Six notices of sale charged at 75cts. each in the High Court instead of three, and $2 in County Court instead of $1.20.

In capias cases the charge for serving writ, $1.50, in addition to the fee for arrest was incorrectly made.

The overcharge of poundage on amount made instead of the amount paid over was in a very few instances still continued.

In some cases I observed that the Sheriff had charged the debtor with the cost of the deed of land sold instead of charging the purchaser.

It is obvious that the only effective means to prevent overcharges and irregularities in the performance of the duties of some of these officers is frequent inspection.

I have prepared in a tabulated form (Appendix A) the statistical returns made by the Sheriffs for 1886.

Local Masters.

The difficulty hitherto experienced in inspecting some of these offices in consequence of entries not having been made in the Master's docket, or the Master's fees entered in a cash book or docket, has been, I am pleased to say, almost entirely removed.

In one or two offices only are overcharges made by Local Masters in their own fees. As instances of these, I would mention the following : Proceeding with reference away from office $15 and expenses $10—ten hours being charged, while a less time was actually occupied. The proper fees being $2 within two miles, and 20cts. a mile over two miles, besides $1.50 an hour while actually engaged on the reference. The fees for order changing solicitor, although a præcipe order, which should have been issued by the Local Registrar and only 50cts. charged therefor, was allowed as follows : Application in Chambers, $1 ; order, 90cts. Frequently $1.50 was charged for an application in Chambers instead of $1. The following charges were made on the return of an appointment to consider a judgment for partition : Considering judgment, $1.50 ; application to make parties, $1 ; order, 50cts. ; settling advertisement for creditors, $1.50, instead of $1.50 for considering and 40cts. for advertisement for creditors. In infancy matters the depositions of the infants should always be taken separate and apart, as required by the Rules of Court, but I find this has not always been observed, nor the charge for drawing these depositions properly made. The tariff provides that they should be charged for at the rate of 20cts. a folio, yet in one case I noticed that $1.50 was charged,

although there were only three folios taken. I observed also that examinations of parties in actions were charged at 20cts. a folio instead of $1.50 an hour. In one instance I found the following charges made: Attending specially to hear and determine and settle report on new basis, $5. The tariff does not allow more than $1.50 an hour. In another instance I found the following unauthorized charges made: Twelve hours reading evidence, etc., and preparing judgment, $18; examining evidence, three hours, $4.50; examining and digesting papers and depositions, seven hours, $10.50. None of these items should have been charged.

The practice of issuing too many warrants or appointments is, I found, too prevalent. This is in direct opposition to the Rules of Court; there should not be more than two or three appointments issued in any reference, namely: 1st To consider the judgment; 2nd. To settle report on sale; and, 3rd. To settle final report; and generally this last appointment is unnecessary. The following appeared in two or three bills of costs and allowed on taxation by the Master: Appointment to settle report on sale, 50cts.; attending settling, $1.50; appointment to sign, 50cts.: attending to sign report on sale, $1.50; appointment to settle general report, 50cts; attending to settle, $1.50; appointment to sign, 50cts; attending signing, $1.50. There is no such item in the tariff as appointment to sign, 50cts.; or attending to sign, $1.50.

Another overcharge is $1 for settling partition order or judgment. A partition order is one not usually requiring settling, and should be entered by the Local Registrar as a judgment. This I found, in some cases, not done, although required by S. C. Rule 583, the Master still continuing to enter it and charging 30cts. a folio for drawing and engrossing, and 10cts. a folio for entering it, besides the 60cts. fee in stamps.

In many offices I found that a fee of $5 was paid and allowed for ascertaining the dower payable to a widow in gross, and, in some cases, I found that a subpœna was issued to examine an actuary and a fee paid him, thus increasing the expense of the reference unnecessarily. I have prepared an annuity table (Appendix B), taken from Carlisle's tables of mortality, which, with the explanations at the foot of it, will enable Masters to ascertain the value of a widow's dower in gross without putting the estate to any unnecessary expense, the regular fee of $1.50 an hour only being chargeable.

In taxations I found that Masters frequently allowed many incorrect items to solicitors. As instances, I mention the following: In a mortgage suit where a wife and husband were defendants, the wife made default; the husband appeared and disputed the amount of plaintiff's claim. The Deputy Registrar, also a Local Master, issued the judgment referring the case to himself as Local Master, instead of taking the account as Deputy Registrar, as there were no subsequent incumbrances. The Master charged, considering the judgment, the Sheriff's Certificates and Registrar's Abstract and drawing a report; all these proceedings were allowed the plaintiff against the defendant, thus unnecessarily increasing the costs of the action about $30, of which the Master received $12.30. Allowing a fee of $10 to a solicitor for attending a sale of lands instead of $5; allowing a counsel fee of $5 on a motion for an order permitting a writ to be issued on a mortgage, where notice of sale given, instead of $2.

In taxing actual disbursements under Chancery Order 643, the following charges were incorrectly allowed: $5 for going to the country, as well as $2.50 for horse hire; $1.30 for each cheque for nine creditors, instead of 30cts. each; counsel fee of $10 for attending on motion for distribution incorrectly allowed.

Masters frequently allow the service of writs of summons and subpœnas where not performed by the Sheriff, thus not only disregarding the tariff but also injuring a fellow officer. Such charges as the following have been allowed in this respect: Letter with writ to Toronto agents to serve, 59cts.; agents attending to serve (2) $1; agent's letter advising, 59cts.; affidavits of service, $2; paid commissioner, 40cts; letter with agent's fees, 55cts. Only the first of these items should have been allowed as a letter to the Sheriff.

Bailiff's fees for serving writs are frequently allowed, although not a Sheriff's officer, or in his employment.

Masters, who are also special examiners, have incorrectly made orders for examinations for discovery before themselves instead of merely issuing an appointment without an order. S. C. Rule 597.

In the matter of counsel fees I found that, notwithstanding the decision of his Lordship the Chancellor in the Bank of British North America vs. The Western Assurance Company, and my instructions in accordance therewith, several Masters allowed counsel fees beyond the tariff without the production of a fiat from one of the taxing officers, and in one case a counsel fee of $20 for attending examination before a Master was allowed without a fiat.

Term fees have been incorrectly allowed during the continuation of a reference in the Master's Office ; and a counsel fee settling a deed and mortgage incorrectly allowed, these instruments being settled by the Master.

All the above items were pointed out to the Masters making or allowing them, and instructions given to prevent their being again made or allowed.

Appendix "C," hereto contains a statistical return of the business transacted by Local Masters during the year.

Local Registrars, Deputy Registrars, Deputy Clerks of the Crown and County Court Clerks.

The fee and cash book prepared by me in 1885 is now in general use, and as a result the duties of these officers have been performed more satisfactorily, and information regarding the various proceedings in the offices more readily given.

Difficulties have frequently arisen in consequence of the tariff of disbursements now in use being in some respects unknown. I append a tariff of the disbursements in force (Appendices D and E), taken from the Statutes, and the various tariffs adopted from time to time.

The entries in the books of office were much more fully made than formerly, and the papers more carefully kept. Many of the officers, however, fail to number the actions entered in the Procedure Book and judgments entered in the Judgment Book correctly. These should be numbered consecutively every year, commencing each year with No. 1. Stamps were found to be more carefully cancelled, and a less number omitted than in former years. I found, that in consequence of an officer permitting a solicitor's clerk to put stamps on proceedings and cancel them, stamps to the value of $124.10 were used by this clerk a second time, thus shewing the great necessity for a personal and careful attention of the officer in the performance of his duties.

I have received communications from several of these officers with respect to their duty under Supreme Court Rule 594, which is as follows :

594. "It shall be the duty of every officer issuing any writ of execution, or renewal thereof, to indorse upon the same a memorandum, signed by him, of the amount, or amounts, respectively hereinafter mentioned, which the party issuing such writ is entitled to receive for suing out such writ or renewal and placing it in the Sheriff's hands, including all attendances, indorsements, letters, etc., and for his costs of any prior or other writs or renewals, specifying the amount allowed for each writ or renewal, and no sum not so endorsed is to be collected for such costs. The amounts to be allowed shall be as follows : For any writ of execution in the High Court, $6 ; for any writ of execution in the County Court, $4 ; for any renewal in the High Court, $4 ; for any renewal in the County Court, $2.50."

I have instructed them that they must decide as to the correct amount the party issuing the writ is entitled to receive for suing out same, or renewal, etc., and not endorse whatever may be asked. For instance, on the renewal of a writ against lands the amount endorsed for the renewal of goods writs kept alive during the currency of the writ against lands should not be added to the lands writ, and in case of concurrent writs it is the officer's duty in endorsing the amount to decide as to the number of such writs to be allowed, and that no instruction should be given to the Sheriff to levy the costs of a writ where the debtor is not liable for such costs.

As in former inspections, I found that taxations by these officers were in many cases very unsatisfactory, the tendency being to allow solicitors larger fees than given by the tariff.

In my last annual report I gave instances of improper taxations. I found that many of these officers carried out my instructions as to such items, but others neglected to do so, and allowed not only those but other items improperly. In Appendix F, I have set forth several of such items improperly allowed. Appendices G and H herewith contain statistical returns of the business transacted by these officers during the year.

Surrogate Registrars.

I am pleased to be able to report that the improvement mentioned in my last annual report with respect to these officers in their charges has been continued, and during my last inspection there were very few instances where any overcharge was made, and these very slight and unintentional.

I found that in some cases where the Judges had commuted their fees the Registrars were not as particular in collecting the same amount for the Judge's fees as they had been previous to the commutation. In such cases I gave instructions to collect the like fees as had been formerly collected.

Appendix I. herewith contains a statistical return of the business transacted by these officers during the year.

County Attorneys and Clerks of the Peace.

I have again to report that the returns of convictions by Justices of the Peace are not as satisfactory as they should be. They very seldom shew the amount of fines collected and their disposal since their former quarterly returns as required by the statute. In a number of cases the Justice of the Peace does not shew how he has disposed of the fines, and I am of opinion that many of the convictions where fines are imposed and which could be readily collected are not enforced.

The schedules printed in many instances unnecessarily shew cases which have been dismissed, settled, or withdrawn. These should not be printed, as the County is thus put to expense without any good purpose being served.

Such schedules should shew whether the fines are paid to the Treasurer of a village, town, township, city, or county, naming the place instead of giving the Treasurer's name merely, as is frequently done.

I have summarised the returns of the Justices of the Peace made to me by the Clerks of the Peace throughout the Province. (Appendix K.)

This summary shews the number of convictions made by Justices of the Peace, and Police Magistrates, where acting simply as Justices of the Peace, and the various offences committed, together with the amount of fines, forfeitures, penalties, or damages imposed; the amounts received thereon, and how appropriated; the amounts not paid by the defendants, for which in default of the payment thereof punishment was inflicted; and the amounts unpaid by defendants, but in respect of which no punishment was inflicted.

I have also summarised the convictions under the Ontario Liquor Laws and *The Canada Temperance Act* respectively. These are also shewn in Appendix K.

Herewith I append a Schedule (Appendix L) containing a return of all the fees and emoluments earned and received and the disbursements made by the above named officials for the past year.

I have the honour to be, Sir,

Your most obedient servant,

JNO. WINCHESTER,

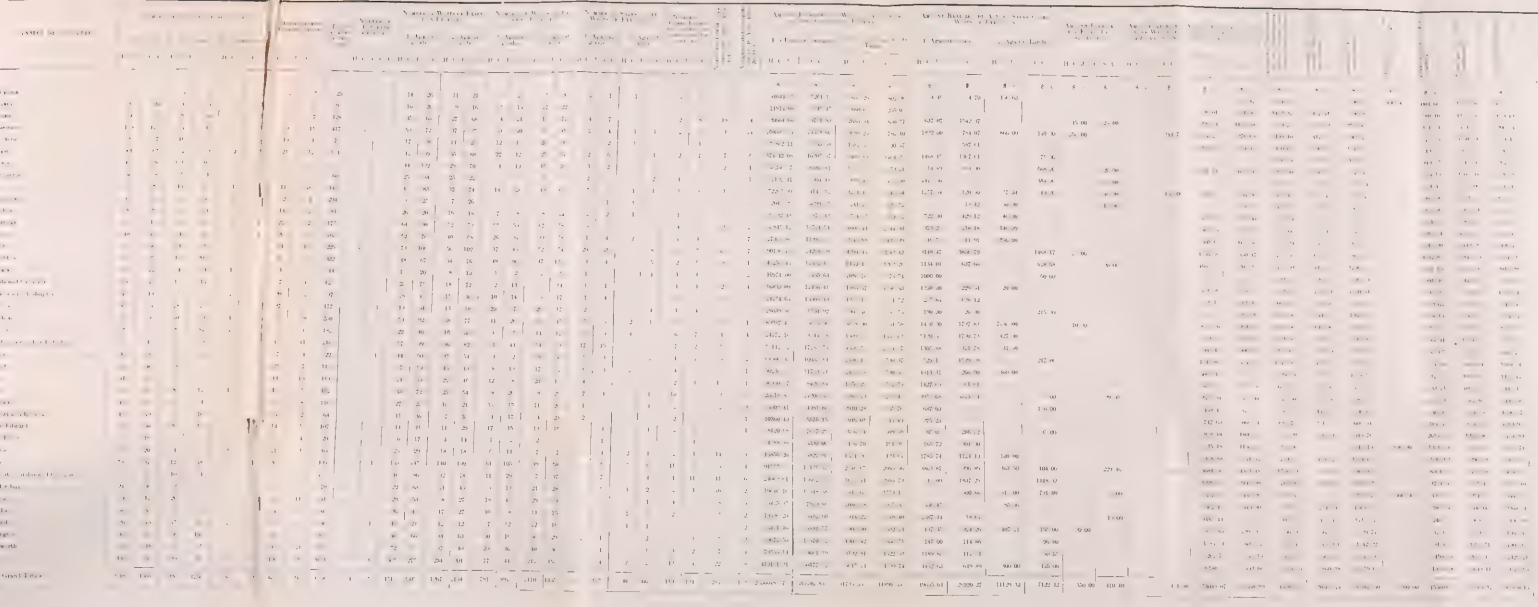
Inspector.

Osgoode Hall,
Toronto, April, 1887.

Tab.

Nu V	Amount Writs without
(1) g	H. C.
C.	$
2	.....
..	96
4	226
2 9	3557
..	5955
2	.....
3	2215
2	.....
7 0	1538

APPENDIX A.—Containing in Tabulated Form Statistics as Returned by the different Sheriffs for the year ending 31st December, 1886



APPENDIX B.—Being an annuity table shewing the value of an annuity of $1 on a single life, according to the Carlisle Table of Mortality.

AGE.	5 PER CENT.	6 PER CENT.	7 PER CENT.	AGE.	5 PER CENT.	6 PER CENT.	7 PER CENT.
1	13.995	12.078	10.605	32	14.506	12.860	11.516
2	14.983	12.925	11.342	33	14.387	12.771	11.448
3	15.824	13.652	11.978	34	14.260	12.675	11.374
4	16.271	14.042	12.322	35	14.127	12.573	11.295
5	16.590	14.325	12.574	36	13.987	12.465	11.211
6	16.735	14.460	12.698	37	13.843	12.354	11.124
7	16.790	14.518	12.756	38	13.695	12.239	11.033
8	16.786	14.526	12.770	39	13.542	12.120	10.939
9	16.742	14.500	12.754	40	13.390	12.002	10.845
10	16.669	14.448	12.717	41	13.245	11.890	10.757
11	16.581	14.384	12.669	42	13.101	11.779	10.671
12	16.494	14.321	12.621	43	12.957	11.668	10.585
13	16.406	14.257	12.572	44	12.806	11.551	10.494
14	16.316	14.191	12.522	45	12.648	11.428	10.397
15	16.227	14.126	12.473	46	12.480	11.296	10.292
16	16.144	14.067	12.429	47	12.301	11.154	10.178
17	16.066	14.012	12.389	48	12.107	10.998	10.052
18	15.987	13.956	12.348	49	11.892	10.823	9.908
19	15.904	13.897	12.305	50	11.660	10.631	9.749
20	15.817	13.835	12.259	51	11.410	10.422	9.573
21	15.726	13.769	12.210	52	11.154	10.208	9.392
22	15.628	13.697	12.156	53	10.892	9.988	9.205
23	15.525	13.621	12.098	54	10.624	9.761	9.011
24	15.417	13.541	12.037	55	10.347	9.524	8.807
25	15.303	13.456	11.972	56	10.063	9.280	9.595
26	15.187	13.368	11.904	57	9.771	9.027	8.375
27	15.065	13.275	11.832	58	9.478	8.772	8.153
28	14.942	13.182	11.759	59	9.199	8.529	7.940
29	14.827	13.096	11.693	60	8.940	8.304	7.743
30	14.723	13.020	11.636	61	8.712	8.108	7.572
31	14.617	12.942	11.578	62	8.487	7.913	7.403

APPENDIX B.—Being an annuity table shewing, etc.—*Continued*

AGE.	5 PER CENT.	6 PER CENT.	7 PER CENT.	AGE.	5 PER CENT.	6 PER CENT.	7 PER CENT.
63	8.258	7.714	7.229	82	3.606	3.474	3.352
64	8.016	7.502	7.042	83	3.406	3.286	3.174
65	7.765	7.281	6.847	84	3.211	3.102	2.999
66	7.503	7.049	6.641	85	3.009	2.909	2.815
67	7.227	6.803	6.421	86	2.830	2.739	2.652
68	6.941	6.546	6.189	87	2.685	2.599	2.519
69	6.643	6.277	5.945	88	2.597	2.515	2.439
70	6.336	5.988	5.690	89	2.495	2.417	2.344
71	6.015	5.704	5.420	90	2.339	2.266	2.198
72	5.711	5.424	5.162	91	2.321	2.248	2.180
73	5.435	5.170	4.927	92	2.412	2.337	2.266
74	5.190	4.944	4.719	93	2.518	2.440	2.367
75	4.989	4.760	4.549	94	2.569	2.492	2.419
76	4.792	4.579	4.382	95	2.596	2.522	2.451
77	4.609	4.410	4.227	96	2.555	2.486	2.420
78	4.422	4.238	4.067	97	2.428	2.368	2.309
79	4.210	4.040	3.883	98	2.278	2.227	2.177
80	4.015	3.858	3.713	99	2.045	2.004	1.964
81	3.799	3.656	3.523	100	1.624	1.596	1.569

To ascertain the dower of a widow in lands, multiply the value of the property by the legal rate of interest, which is at present six per cent., this will give the income of the property for one year; the widow is entitled to one-third of this income; multiply this one-third by the value of the annuity in the six per cent. column opposite the widow's age. The amount thus ascertained will be the widow's dower in gross.

Example: Widow is forty years of age; property out of which dower is to be paid is worth $1,000; six per cent. on this will give an annual income of $60; widow is entitled to one-third of this, or $20, which multiplied by the value opposite her age in the 6 per cent. column, namely, 12.002, produces $240, the amount of her dower in gross.

APPENDIX C.—Being a Return of business transacted by Local Masters.

COUNTIES OR DISTRICTS.	Number of summons and notice to originate proceedings where orders made:—				Number of orders made in Chambers.	Number of judgments or orders brought into the Master's Office for prosecution.	Number of advertisements of sale issued.
	(1) For the administration of estates.	(2) For the partition or sale of property.	(3) Relative to infants under R. S. O. Chap. 40, s. 76 (Examination only).	(4) Under the Winding-up Acts.			
Algoma					1	1	
Brant						15	6
Bruce	2		2		15	16	8
Carleton		1	5		85	24	6
Dufferin						4	1
Elgin	1				5	13	10
Essex					23	5	2
Frontenac	1	1			20	15	7
Grey	2	2	2		2	6	3
Haldimand						1	
Halton			1			1	1
Hastings	13	6	1		110	47	22
Huron	6				7	13	10
Kent		6	1		10	19	6
Lambton		6				1	8
Lanark	2	1			3	7	5
Leeds and Grenville		4			19	9	5
Lennox and Addington	2	3	1		18	15	7
Lincoln	2	3	2		28	12	3
Middlesex	1	3				13	9
Norfolk	1	1			3	9	3
Northumberland and Durham					31	20	14
Ontario	3				25	18	9
Oxford	2	3			14	8	10
Peel		1				9	4
Perth	1	1			6	9	9

throughout the Province of Ontario during the year ending 31st December, 1886.

Amount realized by sales.	Number of reports issued.	Number of references for winding up Companies pending at date of return.	Number of other references so pending.	Number of bills of costs taxed by Master.	Amount of costs of references, etc., taxed by Master or under his direction.	Amount of commission allowed in administration and partition matters.	Amount of fees earned by Local Masters.	Remarks.
$ c.					$ c.	$ c.	$ c.	
.....	.....	.....	.....	.....	.....	.....	10 20	
16045 00	10	.....	9	14	648 58	.....	382 20	Commuted.
5435 00	20	.....	7	27	2182 00	3134 93	687 30	
16195 40	31	.....	15	27	3379 11	889 95	2724 72	
.....	2	.....	5	2	211 93	.....	136 43	
34350 00	23	.....	8	49	4893 78	933 37	1003 30	
9100 00	7	.....	2	7	433 59	.....	440 36	
14695 00	14	.....	.....	12	643 33	.....	740 39	
7080 00	4	.....	6	6	275 74	548 20	551 59	
.....	1	.....	2	1	104 37	225 00	51 00	
800 00	2	.....	.....	2	207 24	.....	121 70	
75395 00	51	.....	17	47	4216 22	2759 02	2588 20	
36400 00	8	.....	3	15	.....	360 97	376 50	Commuted.
25960 00	9	.....	3	19	325 25	809 51	1041 74	
18595 00	8	.....	.....	3	.....	.....	189 08	
13567 50	11	.....	2	4	952 04	952 50	228 10	
6515 00	11	.....	5	9	315 47	174 51	247 88	
14380 00	18	.....	6	20	1611 63	869 50	567 30	
8710 00	11	.....	.....	11	659 93	386 00	776 03	
28993 00	27	2	8	20	3044 29	2102 97	1332 37	
3100 00	8	.....	.....	7	.....	354 78	342 60	
14440 00	25	.....	8	48	3585 52	1332 84	1387 11	
83025 00	13	.....	4	25	1950 69	1136 50	713 15	
30055 00	17	.....	5	9	963 84	1551 99	458 80	
4950 00	18	.....	2	23	3231 89	1223 27	431 10	
18990 00	15	.....	4	20	2504 76	911 98	460 05	

APPENDIX C.—Being a Return of business transacted by Local

COUNTIES OR DISTRICTS.	Number of summons and notice to originate proceedings where orders made:—				Number of orders made in Chambers.	Number of judgments or orders brought into the Master's Office for prosecution.	Number of advertisements of sale issued.
	(1) For the administration of estates.	(2) For the partition or sale of property.	(3) Relative to infants under R. S. O. Chap. 40, s. 76 (Examination only).	(4) Under the Winding-up Acts.			
Peterboro'	2	2				11	6
Prescott and Russell						5	1
Prince Edward	3	5			9	11	5
Renfrew					3		
Simcoe	3	7	2			40	17
Stormont, Dundas and Glengarry	3	1			16	11	10
Thunder Bay						2	
Victoria		2	3			9	10
Waterloo	1		3		2	7	4
Welland					5	6	4
Wellington	2	2			37	13	11
Wentworth	4	1			127	24	15
York						114	25
Totals	57	62	23		624	562	276

Masters throughout the Province of Ontario.—*Continued.*

Amount realized by sales.	Number of reports issued.	Number of references for winding up Companies pending at date of return.	Number of other references so pending.	Number of bills of costs taxed by Master.	Amount of costs of references, etc., taxed by Master or under his direction.	Amount of commission allowed in administration and partition matters.	Amount of fees earned by Local Masters.	Remarks.
$ c.					$ c.	$ c.	$ c.	
10150 00	10	.....	4	6	594 41	216 60	612 05	
.....	5	.....	5	.....	.....	.....	102 00	
8390 00	13	.....	.....	13	2151 70	146 02	613 61	
.....	.....	.....	.....	.....	.....	.....	138 23	
28843 00	20	.....	6	31	2955 40	1425 00	1097 10	
19955 00	12	.....	16	23	2071 14	856 31	757 10	
.....	.....	.....	2	.....	.....	.....	240 00	
11735 00	13	.....	7	15	875 44	1160 60	457 80	Commuted.
14600 00	13	.....	1	11	2056 58	200 00	407 97	Commuted.
3886 00	4	.....	5	4	518 60	.....	137 66	
24127 00	13	.....	7	25	2964 84	981 15	1266 78	
20131 00	25	5	14	23	6187 29	678 94	.....	Commuted.
18905 00	94	1	38	.....	5732 34	2154 79	.....	
637497 90	586	8	226	578	62448 94	28477 20	.....	.....

APPENDIX D.

Being a Table of Stamps to be used in Payment of Fees to Registrars, Local Registrars and Deputy Clerks of the Crown.

IN THE COURT OF APPEAL.

Appeal entered, on every	$4 00
Appeal setting down for hearing, if in Chancery Division	2 00
Appeal setting down for hearing, if in Queen's Bench or Common Pleas Divisions	50
Judgment, decree, or order of the Court passed, on every	2 00
Certificate on discharging appeal	90
Order on appeal, on every (per folio)	30

IN THE HIGH COURT OF JUSTICE.

Affidavit, affirmation, etc., taken before the Clerks of the Crown and Pleas, or their deputies, or the clerk of the process	$0 20
Amending every writ or other proceeding	30
Appearance entered, and filing memorandum thereof, every	20
Appearance, each defendant after the first, every	10
Appointment on every	20
Attorneys, admission of.	
On filing articles and assignments (if any) and every affidavit of execution of such articles, and making the endorsement required by the Statute, and enrolling the articles previous to admission	1 00
For fiat, oath, admission and certificate	5 50
Bail, on every allowance and justification	30
Bail, taking recognizance of	30
Barrister, on swearing in of every (only in one Court)	2 00
Certificate of judgment, on every	1 00
Certificates made evidence by law, or required by the practice, including any necessary search	1 00
Certificate not requiring seal of Court, on every	50
Cognovit book, search in	20
Besides the stamps required by the tariff for every search.	
Cognovit book, every entry in	50
Besides the stamp on each paper filed.	
Commission for the examination of witnesses, every	1 50
Commission for taking bail and affidavits, every	2 50
Debt attachment book for making the entry required in	50
Besides the stamp on each paper filed.	
Debts to the Crown, registering release of	1 00
Besides the stamp on each paper filed.	
Demurrer, special case, points reserved, further directions, judgments, special verdict or appeal case, on setting down on the paper for argument of every	50
Exemplification of proceedings	1 00
Besides, per folio, 10c.	
Exoneretur entering on bail piece	30
Filing every affidavit, writ, or other proceeding	10
Judgment, entering and docketing every	1 60
Interlocutory judgment	1 10
Office copy of proceedings (per folio)	10
Payment of money into Court for every sum under $200.00 †	1 00
Payment of money into Court for every sum of $200.00, and under $400.00 †	2 00
Payment of money into Court for every sum of $400.00, and above that sum †	4 00
And on all moneys paid into Court under plea of payment, in addition to the above, per $100.00	1 00
Payment of money into the Accountant's office	30
Payment of money out of the Accountant's office	30

Record of nisi prius and exhibits, in each cause, for receiving and taking charge of... This fee was formerly paid to the Clerk in Chambers for the same duty, but the duty is now imposed on the Clerks of the Crown and Pleas, and the fee is, therefore, payable to them, and must be paid by stamps.	50
Record of nisi prius, on passing every *	1 00
Record of nisi prius, entered for trial or assessment, on every * Besides $3.00 in money for the jury fund.	2 00
Records of conviction, or acquittal, exemplified..... Besides, per folio, 10c.	1 00
Reference, enquiry, or examination, or other special matter referred to the master, for every meeting, not exceeding one hour *	1 00
Reference, enquirry or examination, or other special matter referred to the master, for every meeting, for every additional hour, or less (payable in cash)	1 00
Rule of Court, every ordinary	50
Rule of Court special, not exceeding 6 folios, per folio 20c., and a fee of	20
Satisfaction, entering on record, and filing satisfaction piece, including any necessary search	50
Search, every, if not more than two terms	10
Search, exceeding two and not more than four terms	20
Search, exceeding four terms, or a general search	50
Taxation of every bill of costs, on	90
Writ of summons or capias, on every, and on every other writ or other document, of what nature or description soever, having the seal of the Court affixed thereto	1 00
Writ, every concurrent, alias, pluries, or renewed	1 00

CLERK IN CHAMBERS.

Every summons	$0 30
Every order	50
Filing each paper	10
Every fiat for a rule of Court	30
Taking every affidavit or affirmation	20
Office copies of papers, per folio For searching, the same allowance as to the Registrars.	10

ON PROCEEDINGS IN MUNICIPAL ELECTION CONTESTED CASES.

Filing each paper	$0 10
Copies of papers, per folio of one hundred words	10
Recognizance, for taking	50
Rule of Court or Judge's order	70
Writ, for signing and sealing each	80

IN THE HEIR AND DEVISEE COMMISSION.

For filing each petition	$0 20
On every claim entered and received	
For setting down any claim for hearing	50
On the hearing of any claim	1 00
On every claim allowed	50
For making up a report on the same	2 00
For each certificate of the allowance of any claim	25
For a copy of the order respecting any claim	25
For each summons for the attendance of any witness or witnesses	40
For each commission for the examination of witnesses	2 00

For any certified copy of any paper or document in the custody of the Clerk of the Commissioners 25c. for the certificate, and at the rate of 10c. for each 100 words in such copy.

And such reasonable fees for any service not herein specially mentioned or included therein, as the said Commissioners may from time to time direct.

* Payable in cash in outer Counties. † In addition to fees payable under sec. 109, chap. 50, R. S. O.

APPENDIX E.

Being a Table of Fees to be taken and received by the Clerks of the several County Courts for their services.

Every writ, mesne and final (except subpœna for which 25c.)	$0 40
Every concurrent, alias, pluries or renewed writ	40
Every appearance entered, and filing memorandum thereof	15
Every appearance, each defendant after the first	10
Filing every affidavit, writ, or other proceeding or paper	10
Amending every writ, or other proceeding or paper	25
Every ordinary rule	30
Every special rule, when prepared by the Clerk	40
Every judgment by default	30
Every final judgment	50
Taxing every bill of costs and giving allocatur	80
Every reference, inquiry, examination, or other special matter referred to the Clerk, for every meeting not exceeding one hour	75
Every reference, inquiry, examination, or other special matter referred to the Clerk, for every additional hour or less	50
For every report made by the Clerk upon such reference, etc	1 00
Upon payment of money into Court, for every sum under $200 *	1 00
do $200 and over *	2 00
Every certificate required from Clerk, and given	50
Exemplification, or office copy of proceedings, per folio	10
Every search, if within one year	10
Every search, if over one year and within two years	20
Every search, over two years, or a general search in one cause	50
Every affidavit, affirmation, or oath administered by Clerk	20
Entering satisfaction on record, and filing satisfaction piece	30
Every commission for the examination of witnesses	50
Entering exoneretur on bail piece	20
For making the entry required in the debt attachment book and in cognovit book, each	50
Every record entered in the sittings docket including records from the Superior Courts	50
Every verdict taken, non-suit, Jury discharged, or record withdrawn	50
Every rule or order of reference at the trial	50
Drawing appointments made by Judge	25
For Judge's summons or fiat, except fiats for costs, speedy execution, or increased counsel fee	25
Judge's order	40
For attending at every special hearing before the Judge, under the 158th section of "The Common Law Procedure Act," and at taking examination and evidence, and at sittings in reference to the County Judge from the Superior Courts, not exceeding one hour	50
Every additional hour or less	50
Every enlargement on application to Judge in Chambers, or on return of summons or otherwise, including search if marked by Clerk	15
Every appointment for taxation of costs or otherwise, made by Clerk	10
For every meeting upon reference under 161st section of "The Common Law Procedure Act," not exceeding two hours	2 00
For each additional hour or less	1 00
(To be taxed by the Judge.)	
For ascertaining the amount due by defendent to plaintiff, when judgment signed under order of any Judge, against a British subject out of jurisdiction in default of plea	1 00
For every Jury sworn	30

In all applications and proceedings before the County Judges not relating to suits instituted in any Court of Civil Judicature, there shall be payable to the Clerks the same Fees as in the foregoing Table, so far as the same are applicable.

* In addition to the fees payable under sec. 109, chap. 50, R. S. O.

APPENDIX F.—(Referred to in the foregoing Report), shewing items of Solicitors' costs in High Court actions, incorrectly allowed by Officer taxing same.

No. of item.	ITEM.	Incorrectly allowed at	Should have been disallowed in part or altogether.	Reasons for disallowing.
		$ c.		
1..	Two letters to defendants (partners) threatening suit	1 00	Allow 50 cents..	Tariff item 139.
2..	Copy special endorsement (writ and endorsement, only four folios)	1 00	Disallow.....	" " 13.
3..	Two common notices on copy of writ for service (in addition to copy of writ and special endorsement).	1 00	"	" " 13.
4	Letter from Auctioneer returning writ served by him and paid	56	"	R. S. O. chap. 50, sec. 335, and Sheriff's Tariff, 1874, item 7.
	Letter to him enclosing his fees	56	"	
	Paid his fees	2 00	"	
	Affidavit of service	1 00	"	
	Affidavit of mileage	1 00	"	
5..	Affidavit of mileage where no mileage travelled by Sheriff	1 00	"	R. S. O. chap. 50, sec. 335.
6..	Affidavit of payment of Sheriff's fees	1 00	"	R. S. O. chap. 50, sec. 335. No such affidavit required.
7	*Præ* and attending bespeak and for certificate of *lis pendens*	1 00	"	Action for alimony or on a promissory note simply, no interest in land called in question. R. S. O. chap. 40, sec. 90. See 20 C. L. J. 118.
	Paid for and filing *præcipe*	1 00	"	
	Attending register and paid	1 00	"	
8..	Instructions for *lis pendens*	1 00	"	Covered by instructions for suit.
9..	Drawing certificate and engrossing, 2 folios	60	"	Drawn by Officer.
10..	Fee on	1 00	"	Fee not allowed; tariff 120-123.
11..	Affidavit of non-appearance, attending to swear and paid	1 70	Allow $1	Tariff item 13.
12..	Action for ejectment; endorsement does not claim costs; no affidavit of adverse possession, nor order for costs; judgment by default; yet costs taxed and allowed at	22 99	Disallow..	R. S. O. c. 51, s. 20, ss. 2.
13	Instructions for order for costs of ejectment action, judgment by default	1 00	"	The writ was served on defendant whilst in adverse possession, and instead of these costs being allowed an affidavit of adverse possession should have been filed and allowed. R. S. O. chap. 51, sec. 20, ss. 2.
	Drawing affidavit of Solicitor, and engrossing three folios	90	"	
	Attending to swear, and paid	70	"	
	Attending chambers, move for order	2 00	"	
	Attending, bespeak and for	1 00	"	
	Paid for and filing	60	"	
	Fee on	1 00	"	
14..	Instructions for order to produce	1 00	Allow 50 cents..	Common instructions for *præcipe* order.
15..	Drawing order for production, and engrossing two folios	60	"	Drawn by Officer.
16..	Perusing affidavit on production, 18 folios long	1 00	"	Tariff items, 95 and 96, only allowed where over 20 folios.
17	Drawing summons to shew cause before Local Master, and engrossing three folios	90	Allow $1 for all.	Tariff item 98.
	Attending Local Master for	2 00		
	Attending to file copy with him	50		
18..	Fee on summons	1 00	Disallow.....	No fee allowed on summons of Local Master.
19..	Attending return of summons when order made. (No fee marked).	4 00	Allow $1	Tariff items 99, 100, and 165, and Rule 544.
20	Attending chambers on application for order	1 00	Allow $1 or $2.	Only one fee allowable, either attendance as Solicitor or Counsel fee, not both.
	Counsel fee, on	2 00		

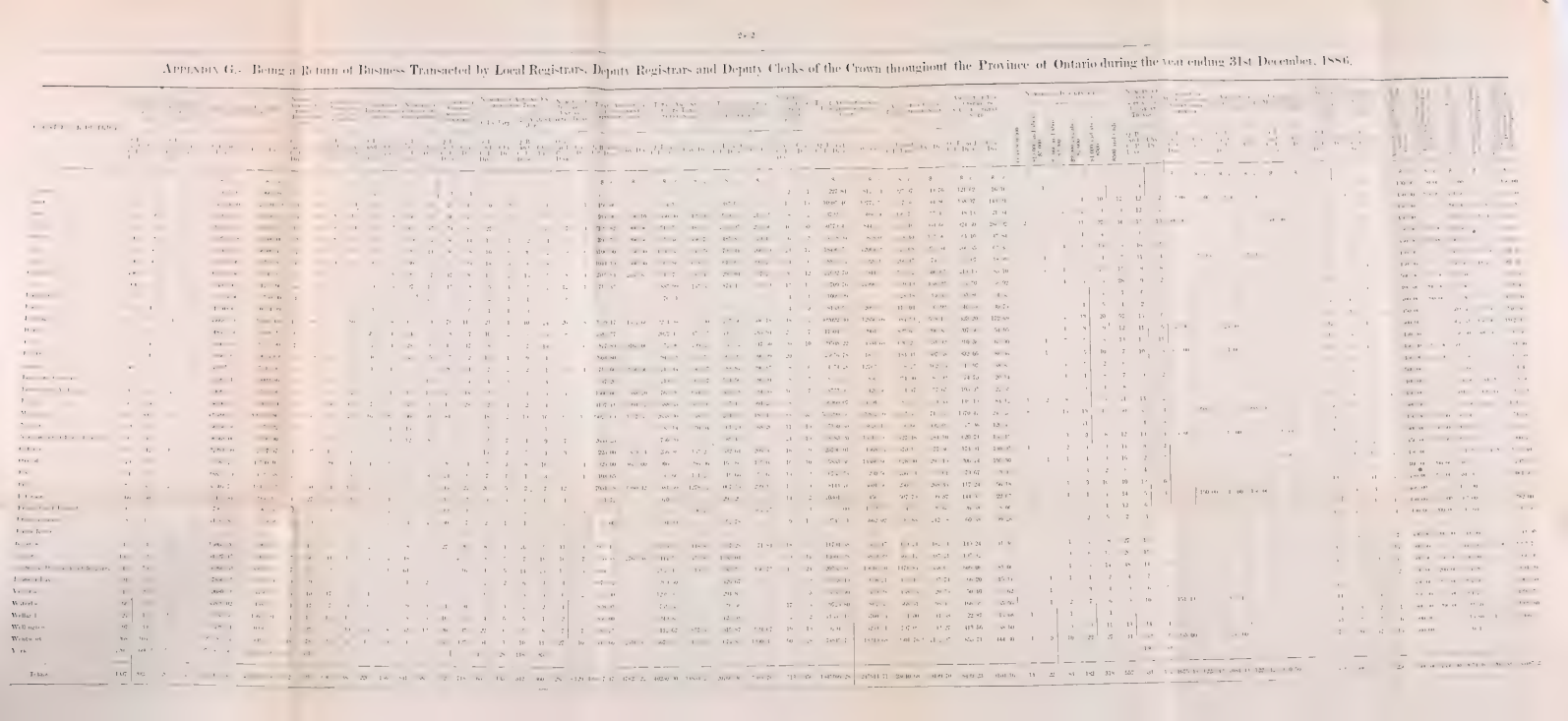
APPENDIX F.—*Continued.*

No. of item.	ITEM.	Incorrectly allowed at	Should have been disallowed in part or altogether.	Reasons for disallowing.
		$ c.		
21	Attending, serve defendant with subpœna	50		R. S. O. chap. 50, sec. 335, and Sheriff's Tariff item 7, and Tariff item 127.
	Affidavit of service	1 00		
	Attending to swear, and paid	70		
	Copy of affidavit to keep	30		
22	Paid noting *pro. con.*	80	Allow 10 cents	Only a filing where paid in stamps.
23	Copy of depositions of defendant, to attach to brief, 14 folios	1 40	Disallow	A brief of depositions or special affidavits to be allowed only where fee and brief for second counsel is taxed.
24	Paid Deputy Registrar in chancery, certifying pleadings	1 00	Allow $8	Tariff of 1856, Chancery tariff under order 615, and Rule 432.
	Paid him, entering action for trial	8 00		
25	Paid Local Registrar of High Court entering chancery action for trial	8 00	Allow $3 only	44 Vict. chap. 8, sec. 1, and Rule 432.
26	Attending set case down for judgment	1 00	Allow 50 cents	Tariff item 110 and 114.
27	Instructions for affidavit of disbursements	1 00	Disallow	Not special; if special allow it.
28	Attending to enter judgment	1 00	Allow 50 cents	Tariff item 114.
29	Drawing bill of costs and engrossing two folios	1 00	Allow 40 cents	Tariff item 156.
30	Drawing bill of costs, 16 folios, and engrossing copy for Local Registrar, or Master	4 80	Allow $3.20	Tariff item 156.
31	Paid Local Registrar taxing cost, three hours	3 00	Allow $1	Tariff of 1856, item 11. R. S. O. chap. 39. sec. 53, and Rule 432.
32	Counsel fee attending reference before Local Registrar	5 00	Allow $1	Attended by a Solicitor, not a Barrister. Tariff item 111.
33	Counsel fee on Motion for Order to amend, (*fiat* given by Local Judge or Master)	5 00	Allow $1 or $2	Tariff item 165. Rule 544.
	Second Counsel fee, where costs of day given, and First Counsel fee allowed at $10	5 00	Disallow	See items 163 and 164.
34	Counsel fee at trial, First Counsel	50 00	Disallow	Officer has no power to tax or allow any fee beyond his jurisdiction by consent.
	Second Counsel	20 00	Allow one fee at $20	
	(No *fiat*, but allowed by consent).			
35	Counsel fees at trials frequently allowed beyond $20 without *fiat* of taxing Officer in Toronto		Allow up to $20 only	No fee beyond $20 must be allowed in any case without the *fiat* of Taxing Officer at Toronto.
36	Counsel fees on applications before Local Judge or Local Master, frequently allowed on *fiat* from such Judge or Master		Disallow beyond $1 or $2	The Local Judge or Master has no power to grant a *fiat*. It must be from the Master in Chambers at Toronto, or Master in Ordinary to be acted on. Tariff item 165. Rule 544.
37	Letter to Agent with bill of costs, and papers to enter judgment and paid	56	Disallow	Papers sent by a Country Solicitor to the Officer direct who performs the work contrary to C. L. Rule 145 (1856). O. C., Rule 417.
	Agent attending taxation	1 00		
	Agent attending enter judgment	50		
	Agent attending for certificate of taxation	50		
	Letter from Agent, with	56		
38	Writ endorsed for debt, and $25 for costs; no bill of cost brought in, but cost allowed at $25, without taxation	25 00	Disallow	Officer must require a bill of costs to be filed in every case where judgment entered by default and tax it.

rear end

	Amount of Money paid into Court with Defence.	
	Q. B. and C. P. Divs.	Chy. Div.
	$ c.	$ c.
	.....	.....
0	2 00	2 00
4	.....	.....
22	600 00	.....
95	.....	.....
100	.....	.....
1044	.....	73 13
2315	.....	.....

APPENDIX G.—Being a Return of Business Transacted by Local Registrars, Deputy Registrars and Deputy Clerks of the Crown throughout the Province of Ontario during the year ending 31st December, 1886.



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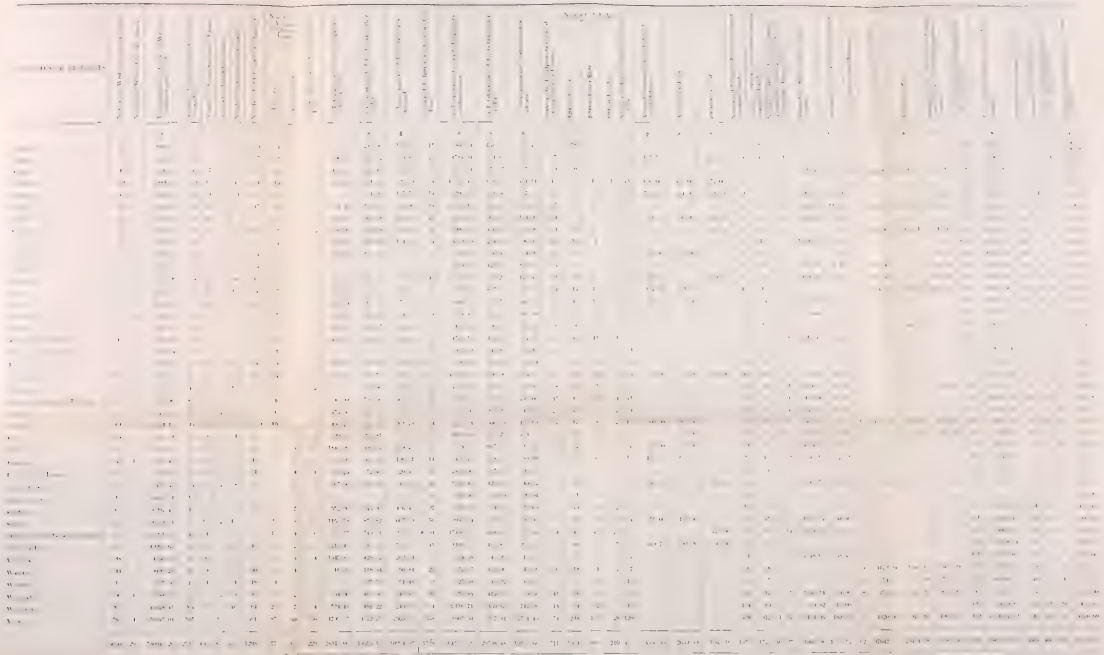
APPENDIX H.—Being a Return of business transacted by County Court Clerks throughout the Province of Ontario, during the year ending 31st December, 1886.



APPENDIX I.—Being a return of business transacted by Surrogate Registrars

COUNTIES OR DISTRICTS.	Number of Probates issued.	Number of Letters of Administration issued.	Number of Letters of Guardianship issued.	Number of Probates and Letters issued under Sec. 64, Cap 46, R.S. O., and included in above.	Number of Wills proved Guardianship issued where			
					Above $100,000.	From $50,000 to $100,000.	From $25,000 to $50,000.	From $10,000 to $25,000.
Algoma	4	5	.....	1	.....	.....	.....	.....
Brant	43	21	3	4	.....	.....	.....	1
Bruce	45	22	2	.....	.....	.....	1	1
Carleton	57	42	3	6	.....	1	1	1
Dufferin	19	8	5	1	.....	.....	.....	.....
Elgin	38	20	4	4	.....	.....	1	1
Essex	32	23	4	2	.....	.....	.....	.....
Frontenac	31	18	1	4	.....	1	.....	2
Grey	69	28	3	3	.....	.....	.....	.....
Haldimand	38	16	5	5	.....	.....	1	.....
Halton	30	20	3	1	.....	.....	1	1
Hastings	39	25	5	1	1	1	.....	3
Huron	76	22	3	2	.....	1	.....	1
Kent	41	24	2	4	.....	.....	.....	.....
Lambton	57	24	4	5	.....	.....	.....	1
Lanark	22	10	1	2	.....	.....	1	.....
Leeds and Grenville	58	16	3	1	.....	5	.....	2
Lennox and Addington	23	8	3	.....	1	1	.....	1
Lincoln	36	17	5	1	.....	.....	1	1
Middlesex	113	60	7	9	.....	2	3	14
Norfolk	28	8	7	4	.....	.....	.....	.....
Northumberland and Durham	64	44	6	6	.....	1	1	2
Ontario	70	24	14	2	.....	1	.....	3
Oxford	57	39	8	2	.....	.....	2	4
Peel	45	20	2	3	.....	.....	1	2
Perth	73	19	3	4	.....	.....	.....	5

throughout the Province of Ontario during the year ending December, 1886.

and Letters of Administration or personalty valued as follows:					Number where there is realty, but where the personalty is valued $200 and under.	Total amount of personalty devolving.	Amount of Fees collected by Surrogate Registrar for—			
From $5,000 to $10,000.	From $1,000 to $5,000.	From $500 to $1,000.	From $200 to $500.	$200 and under.			Registrar's Fees.	Judge's Fees.	Fee Fund.	Total.
						$ c.	$ c.	$ c.	$ c.	$ c.
.....	3	3	2	1	1	57086 10	39 08	31 00	21 00	91 08
13	22	9	10	12	6	158605 95	531 03	295 50	203 00	1029 53
3	29	19	16	.....	.....	158210 00	537 50	354 90	200 50	1082 90
6	39	32	13	9	4	322184 07	711 34	502 50	341 50	1555 34
1	16	10	4	1	.....	37242 17	222 20	91 00	71 00	384 20
1	20	10	12	13	.....	115452 70	439 45	231 50	164 00	834 95
3	17	14	10	9	2	63020 29	427 73	214 50	127 00	769 23
3	15	20	2	6	2	169872 84	329 52	294 00	169 00	792 52
2	40	26	21	11	8	120221 20	608 80	299 50	227 50	1135 80
6	16	17	6	13	8	135759 00	457 65	230 50	156 00	844 15
3	26	10	.....	9	1	45455 03	427 61	272 00	175 00	874 61
2	19	12	24	8	5	763283 98	535 04	920 80	501 50	1957 34
10	46	24	12	5	2	258516 03	653 05	471 50	296 50	1421 05
2	15	22	12	14	4	63824 75	369 05	212 50	144 50	726 05
6	40	20	9	5	3	164346 16	551 10	307 00	227 00	1085 10
4	15	9	1	2	1	110958 90	290 31	225 20	122 00	637 51
5	34	13	12	6	2	595050 66	621 50	738 50	456 50	1816 50
4	16	9	1	1	.....	249939 91	296 59	553 50	178 00	1028 09
2	24	15	10	5	1	142138 27	413 88	250 00	164 00	827 88
11	67	41	33	9	7	728396 32	1232 30	1155 00	655 50	3042 80
2	15	10	9	7	2	59009 78	300 60	117 50	101 50	519 60
7	51	26	12	14	8	332477 10	733 64	503 00	357 90	1594 54
10	44	21	17	12	2	306400 74	762 00	594 90	362 50	1719 40
3	48	25	14	8	7	266844 51	861 75	468 50	312 00	1642 25
3	35	12	8	6	3	162311 94	512 44	283 00	195 50	990 94
7	38	17	14	10	4	251696 27	675 20	501 60	293 00	1469 80

APPENDIX I.—Being a return of business transacted by Surrogate Registrars

COUNTIES OR DISTRICTS.	Number of Probates issued.	Number of Letters of Administration issued.	Number of Letters of Guardianship issued.	Number of Probates and Letters issued under Sec. 64, Cap. 46, R.S.O., and included in above.	Number of Wills proved Guardianship issued where			
					Above $100,000.	From $50,000 to $100,000.	From $25,000 to $50,000.	From $10,000 to $25,000.
Peterboro'	27	16	2	2	1	1	1	2
Prescott and Russell	4	8	.....	1	.....	.....	1	1
Prince Edward	14	11	1	3	.....	2	.....	1
Renfrew	6	13	.....	1	.....	....	.....	.....
Simcoe	58	34	6	3	....	.....	2	2
Stormont, Dundas and Glengarry	37	17	3	4	.....	.....	2	1
Thunder Bay	2	2	.....	.....	....	.....	.....	.....
Victoria	15	14	....	2	.....	.....	.....	2
Waterloo	84	27	3	5	.....	1	2	8
Welland	45	23	5	3	.....	.....	1	2
Wellington	73	36	8	3	.....	.....	1	5
Wentworth	92	43	5	6	1	1	3	4
York	242	126	9	33	2	2	14	26
Totals	1907	853	148	143	6	21	41	100

throughout the Province of Ontario, etc.—*Continued.*

and Letters of Administration or personalty valued as follows:					Number where there is realty, but where the personalty is valued $200 and under.	Total amount of personalty devolving.	Amount of Fees collected by Surrogate Registrar for—			
From $5,000 to $10,000.	From $1,000 to $5,000.	From $500 to $1,000.	From $200 to $500.	$200 and under.			Registrar's Fees.	Judge's Fees.	Fee Fund.	Total.
						$ c.	$ c.	$ c.	$ c.	$ c.
7	20	8	1	4	2	371666 67	294 05	436 50	259 00	989 55
1	.....	3	6	1	.....	67361 72	74 89	89 00	149 00	312 89
... ..	10	5	4	4	1	155985 00	227 51	211 10	120 00	558 61
1	8	6	3	1	1	29488 00	97 75	58 00	45 50	201 25
8	40	17	21	7	5	187747 52	818 20	376 10	312 00	1617 25
4	20	7	14	9	4	129910 59	342 20	237 00	164 45	743 65
.....	2	2	.....	.....	.....	7242 00	21 30	13 00	10 50	44 80
2	11	8	3	3	.....	235502 03	206 50	116 00	84 00	406 50
13	37	20	14	19	13	431796 37	803 11	623 00	411 50	1837 61
5	26	12	14	13	4	170839 56	570 20	401 70	227 50	1199 40
6	36	30	21	18	13	255209 00	857 18	515 80	326 50	1699 48
14	41	31	24	19	8	931237 08	939 24	1205 90	698 00	2843 14
24	142	59	45	63	30	1974778 00	3019 12	1680 10	1435 00	6134 22
204	1143	654	454	357	164	12117068 20	21811 61	16079 60	10523 35	48414 56

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Mercer Reformatory and Refuge for girls.

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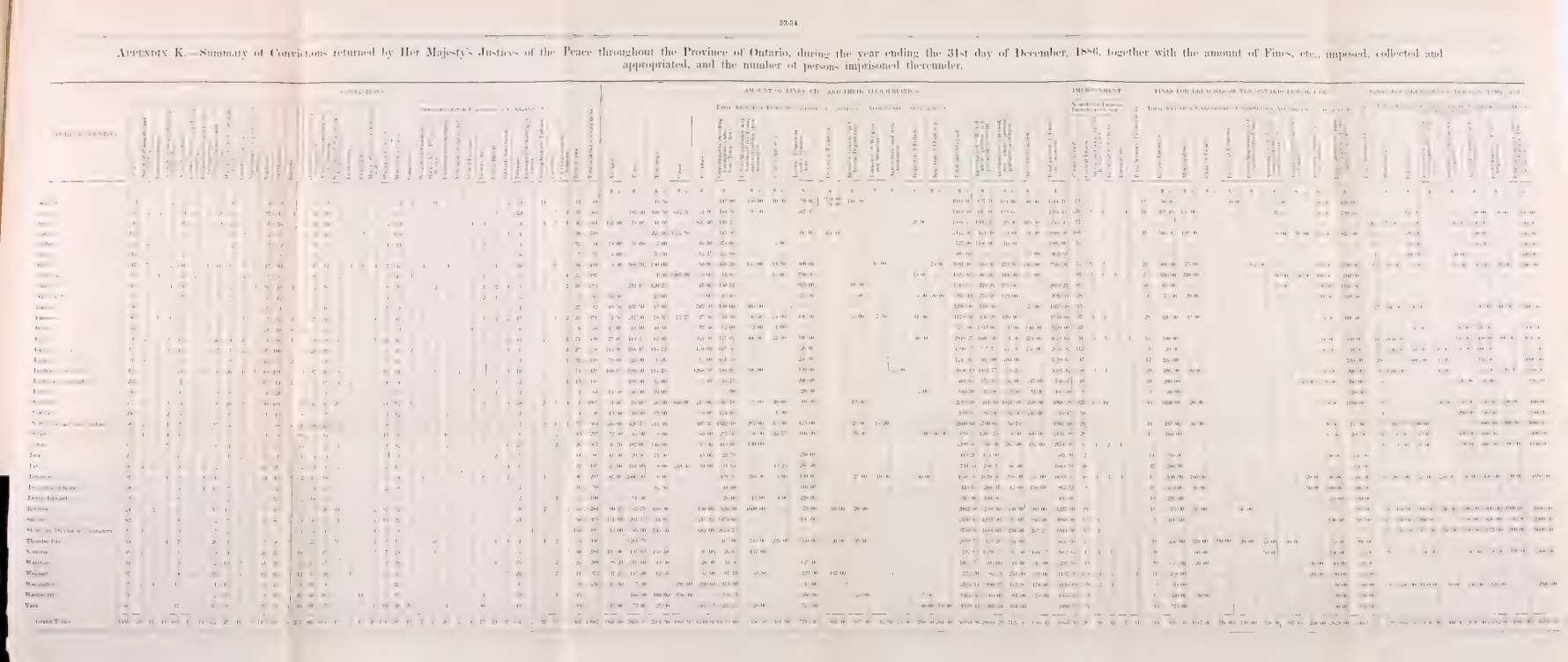
APPENDIX K.—Summary of Convictions returned by Her Majesty's Justices of the Peace throughout the Province of Ontario, during the year ending the 31st day of December, 1886, together with the amount of Fines, etc., imposed, collected and appropriated, and the number of persons imprisoned thereunder.



APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the different year ending 31st

COUNTY OR DISTRICT.	COUNTY TOWN.	OFFICE.	OFFICER.	Amount Earned	Salary paid by the Government.
				$ c.	$ c.
Algoma	Sault Ste. Marie.	Sheriff	W. H. Carney	1604 60	1400 00
		Surrogate Judge	Judge McCrea	31 00	
		Local Master	"	10 20	
		County Attorney	J. J. Kehoe	40 00	400 00
		Clerk of the Peace	"	312 09	400 00
		Local Registrar	T. A. P. Towers	6 00	150 00
		District Court Clerk	"	206 20	500 00
		Surrogate Registrar	"	39 08	
Brant	Brantford	Sheriff	W. J. Scarfe	2780 40	
		Surrogate Judge	Judge Jones	Commuted at	
		Local Master	"	Commuted at	
		County Attorney	G.R. VanNorman,Q.C.	622 41	
		Clerk of the Peace	"	781 89	
		Local Registrar	W. B. Rubidge	354 50	675 00
		County Court Clerk	"	726 43	
		Surrogate Registrar	"	531 03	
Bruce	Walkerton	Sheriff	W. Sutton	4374 59	
		Surrogate Judge	Judge Kingsmill	Commuted at	
		Local Master	W. A. McLean	687 30	
		Deputy Registrar	"	231 20	
		County Attorney	Thos. Dixon	382 25	
		Clerk of the Peace	"	1376 75	
		Deputy Clerk of the Crown	Wm. Gunn	290 00	450 00
		County Court Clerk	"	993 35	
		Surrogate Registrar	"	537 50	
Carleton	Ottawa	Sheriff	John Sweetland	7579 95	
		Surrogate Judge	Judge Ross	502 50	
		Local Master	W. M. Matheson	2724 72	
		Deputy Registrar	"	821 84	
		County Attorney	Robert Lees, Q.C.	430 05	

County Judicial Officers in the Province of Ontario, earned and received during the December, 1885.

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
.....	3004 60	2717 03	116 41	.....	2833 44	1378 88	1454 56	1625 12	
31 00	.....	31 00	.....	31 00	.....	.....	31 00	.....	
10 20	41 20	.....	6 90	6 90	37 90	.....	6 90	41 20	
440 00	.....	424 00	22 00	446 00	.....	.....	446 00	.....	
712 09	1152 09	606 06	124 67	730 73	1176 73	9 76	720 97	1142 33	
156 00	.....	156 00	.....	156 00	.....	.....	156 00	.....	
706 20	.....	706 20	.....	706 20	.....	5 00	701 20	.....	
39 08	901 28	39 08	.....	39 08	901 28	2 00	37 08	894 28	
.....	2780 40	1878 02	705 27	.....	2583 29	1101 21	1482 08	1679 19	
.....	360 00	360 00	.....	360 00	.....	.....	360 00	.....	
.....	577 00	577 00	.....	577 00	937 00	25 00	552 00	912 00	Commuted from 1st April, 1886.
622 41	.....	622 41	.....	622 41	.....	.....	622 41	.....	
781 89	1404 30	781 89	.....	781 89	1404 30	.....	781 89	1404 30	
1029 50	.....	1029 50	.....	1029 50	.....	58 00	971 50	.....	
726 43	.....	726 43	.....	726 43	.....	30 00	696 43	.....	
531 03	2286 96	531 03	.....	531 03	2286 96	100 00	431 03	2098 96	
.....	4374 59	4026 02	587 56	.....	4613 58	1174 25	3439 33	3200 34	
.....	408 00	408 00	.....	.....	408 00	.....	.....	408 00	
687 30	.....	466 20	288 75	754 95	.....	5 00	749 95	.....	
231 20	918 50	200 00	100 00	300 00	1054 95	5 00	295 00	908 50	
382 25	.....	334 55	225 20	559 75	.....	33 45	526 30	.....	
1376 75	1759 00	1362 81	585 89	1948 70	2508 45	76 66	1872 04	1648 89	
740 00	.....	740 00	.....	740 00	.....	.....	740 00	.....	
993 35	.....	742 00	223 94	965 94	.....	532 90	433 04	.....	
537 50	2270 85	399 50	.....	399 50	2105 44	266 45	133 05	1471 50	
.....	7579 95	7873 55	1144 59	.....	9018 14	3750 53	5267 61	3829 42	
.....	502 50	502 50	.....	.....	502 50	.....	502 50	502 50	
2724 72	.....	2686 12	11 20	2697 32	.....	69 04	2628 28	.....	
821 84	3546 56	821 74	2 10	823 84	3521 16	49 15	774 69	3428 37	
430 05	.....	401 55	77 50	479 05	.....	30 50	448 55	.....	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

COUNTY OR DISTRICT.	COUNTY TOWN.	OFFICE.	OFFICER.	Amount Earned.	Salary paid by the Government.
				$ c.	$ c.
Carleton—*Con*....	Ottawa	Clerk of the Peace	Robt. Lees, Q.C.....	1154 06	.....
		Deputy Clerk of the Crown	J. P. Featherston	458 10	450 00
		County Court Clerk	"	1681 70	.....
		Surrogate Registrar	"	711 34	.....
Dufferin.....	Orangeville	Sheriff.....	Thos. Bowles	2713 79	.... ..
		Surrogate Judge	Judge McCarthy.....	Commuted at	
		Local Master	"	136 43	... .
		County Attorney	J. P. McMillan.....	195 27	.....
		Clerk of the Peace	"	706 24	....
		Local Registrar	John McLaren.....	224 30	675 00
		County Court Clerk.....	"	310 20	.....
		Surrogate Registrar.....	"	222 20	.....
Elgin	St. Thomas	Sheriff.....	Dugald Brown	4949 17	.....
		Surrogate Judge	Judge Hughes	231 50	.....
		Local Master	Robert Miller.....	1003 30	.....
		County Attorney	D. J. Donahue.....	412 57	.....
		Clerk of the Peace.....	"	353 51	.....
		Local Registrar	D. McLaws	606 55	675 00
		County Court Clerk.....	"	914 05	.....
		Surrogate Registrar.....	"	439 45	.....
Essex	Sandwich.....	Sheriff	J. C. Iler	4324 18	.....
		Surrogate Judge	Judge Horne	214 50	.....
		Local Master	S. S. Macdonell, Q.C..	440 36	.....
		Deputy Registrar	" ..	345 19	.....
		County Attorney	" ..	332 40	.....
		Clerk of the Peace.....	" ..	1127 98	.....
		Deputy Clerk of the Crown	F. E. Marcon	348 62	450 00
		County Court Clerk.....	"	579 30	.....
		Surrogate Registrar	"	427 73	.....
Frontenac.....	Kingston	Sheriff	Wm. Ferguson.....	1724 46	.....

different County Judicial Officers in the Province of Ontario, etc.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1154 06	1584 11	988 84	161 11	1149 95	1629 00	46 55	1582 45	1507 06	
908 10	.....	877 30	15 00	892 30	.....	100 00	792 30	.....	
1681 70	.....	1501 20	176 62	1677 82	.....	374 00	1303 82	.....	
711 34	3301 14	661 33	9 54	670 87	3240 99	230 00	440 87	2597 14	
.....	2713 79	2352 46	465 29	.....	2817 75	987 37	1830 38	1726 42	
168 00	.....	168 08	.....	168 00	.....	.....	168 00	.....	
136 43	304 43	77 38	55 45	132 83	300 83	4 55	128 28	299 88	
195 27	.....	178 27	17 00	195 27	.....	.....	195 27	.....	
706 24	901 51	706 00	306 98	1012 98	1208 25	150 00	862 98	751 51	
899 30	.....	896 30	.....	896 30	.....	12 05	884 25	.....	
310 20	.....	280 60	5 85	286 45	.....	11 51	274 94	.....	
222 20	1431 70	222 20	6 50	228 70	1411 45	14 46	214 24	1393 68	
.....	4949 17	1912 64	1236 76	.....	3149 40	1741 56	1407 84	3207 61	
.....	231 50	231 50	.....	.....	231 50	.....	231 50	231 50	
.....	1003 30	863 30	114 06	.....	977 36	.....	977 36	1003 30	
412 57	.....	153 57	.....	153 57	.....	.....	153 57	.....	Appointed 19th April 1886.*
353 51	766 08	11 48	.....	11 48	165 05	.....	11 48	766 08	
1281 55	.....	1232 55	18 00	1250 55	.....	70 00	1180 55	.....	
914 05	.....	878 75	55 00	933 75	.....	79 00	854 75	.....	
439 45	2635 05	424 00	24 18	448 18	2632 48	80 00	368 18	2406 05	
.....	4324 18	3774 68	500 00	.....	4274 68	1503 98	2770 70	2820 20	
.....	214 50	214 50	.....	214 50	.....	214 50	.....	214 50	
440 36	.....	440 36	.....	440 36	.....	.....	440 36	.....	
345 19	.....	345 19	.....	345 19	.....	.....	345 19	.....	
332 40	.....	296 40	86 00	382 40	.....	15 00	367 40	.....	
1127 98	2245 93	1075 08	32 00	1107 08	2275 03	8 64	1098 44	2222 29	
798 62	.....	798 62	.....	798 62	.....	.....	798 62	.....	
579 30	.....	579 30	.....	579 30	.....	.....	579 30	.....	
427 73	1805 65	427 73	.....	427 73	1805 65	22 16	405 57	1783 49	
.....	1724 46	1724 46	.....	.....	1724 46	319 00	1405 46	1405 46	

* Fees from date of appointment only.

APPENDIX L.—Schedule shewing return of Fees and Emoluments of the

COUNTY OR DISTRICT.	COUNTY TOWN.	OFFICE.	OFFICER.	Amount earned.	Salary paid by the Government.
				$ c.	$ c.
Frontenac—*Con* ..	Kingston	Surrogate Judge	Judge Price.....	commuted at	
		Local Master	J. A. Henderson, Q.C.	740 39	.....
		Deputy Registrar	" ..	344 78	.....
		County Attorney.....	B. M. Britton, Q.C .	296 40	.....
		Clerk of the Peace	" ..	978 57	.....
		Deputy Clerk of the Crown	John Fraser	130 60	450 00
		County Court Clerk.....	"	688 39	.....
		Surrogate Registrar.....	"	329 52	.....
Grey.	Owen Sound...	Sheriff.....	C. H. Moore.	4605 56	.....
		Surrogate Judge	Judge McPherson....	299 50	.....
		Local Master	Alfred Frost.....	551 59	.....
		County Attorney	"	233 20	.....
		Clerk of the Peace	Wm. Armstrong	1433 14	.....
		Local Registrar	George Inglis	126 30	675 00
		County Court Clerk.....	"	801 75	.....
		Surrogate Registrar.... ..	"	608 80	.....
Haldimand.....	Cayuga.....	Sheriff.....	R. H. Davis	2119 09	.....
		Surrogate Judge	Judge Upper	230 50	.....
		Local Master	"	51 00	.....
		County Attorney	J. R. Martin	358 23	.....
		Clerk of the Peace	"	894 42	..... .
		Local Registrar.....	Jas. Mitchell	72 00	600 00
		County Court Clerk.....	"	238 90	.....
		Surrogate Registrar.....	"	457 65	....
Halton.....	Milton	Sheriff.....	M. Clements.....	1754 81	.....
		Surrogate Judge	Judge Miller	commuted at	
		Local Master	"	121 70	.....
		County Attorney	John Dewar	167 00	.....
		Clerk of the Peace	"	870 65	.....
		Local Registrar.....	W. L. P. Eager.....	52 20	600 00

different County Judicial Officers in the Province of Ontario.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
.....	752 00	752 00	.....	.....	752 00	.....	752 00	752 00	
740 39	....	422 04	318 35	740 39	.....	168 24	572 15	.....	
344 78	1085 17	247 91	96 87	344 78	1085 17	84 12	260 66	832 81	
296 40	.....	188 90	39 50	228 40	.....	8 50	219 90	.....	
978 57	1274 97	602 21	371 54	973 75	1202 15	286 37	687 38	980 10	
580 60	... .	580 60	19 10	599 70	.....	166 66	433 04	....	
688 39	.....	584 33	106 78	691 11	.....	178 66	512 45	.....	
329 52	1598 51	296 87	14 29	311 16	1601 97	184 76	126 40	1069 43	
.....	4605 56	3485 08	1014 10	.....	4499 18	1931 86	2567 32	2673 70	
.....	299 50	299 50	.....	.....	299 50	.....	299 50	299 50	
551 59	.....	415 77	17 80	433 57	.....	.....	433 57	..... .	
233 20	784 79	231 20	81 00	312 20	745 77	32 65	279 55	752 14	
.....	1433 14	1433 14	365 28	....	1798 42	181 15	1617 27	1251 99	
801 30	....	747 60	.....	747 60	.....	....	747 60	.....	
801 75	.....	779 25	.....	779 25	.....	69 30	709 95	.....	
608 80	2211 85	517 60	42 25	559 85	2086 70	163 75	396 10	1978 80	
.....	2119 09	1529 74	202 55	..... .	1732 29	503 74	1228 55	1615 35	
230 50	.....	230 50	.....	230 50	.....	.....	230 50	.....	
51 00	281 50	22 00	.....	22 00	252 50	.....	22 00	281 50	
358 23	.....	187 51	71 47	258 98	.....	50 00	208 98	.....	
894 42	1252 65	511 76	361 98	873 74	1132 72	250 00	623 74	952 65	
672 00	.....	672 00	.....	672 00	.....	5 00	667 00	.....	
238 90	.....	238 90	.....	238 90	.....	10 00	228 90	.....	
457 65	1368 55	457 65	.....	457 65	1368 55	50 00	407 65	1303 55	
.....	1754 81	1573 79	243 04	. ... ..	1816 83	502 08	1313 75	1252 73	
417 00	.....	.....	.....	417 00	.....	.....	417 00	.....	
121 70	538 70	57 20	.....	57 20	474 20	.....	57 20	538 70	
167 00	.....	148 00	46 00	194 00	.....	.....	194 00	.....	
870 65	1037 65	575 05	347 49	922 54	1116 54	16 26	906 28	1021 39	
652 20	.....	652 20	.....	652 20	.....	125 00	527 20	.....	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

County or District.	County Town.	Office.	Officer.	Amount Earned.	Salary paid by the Government.
				$ c.	$ c.
Halton—*Con.*	Milton	County Court Clerk	W. L. P. Eager	278 79	
		Surrogate Judge	"	427 61	
Hastings	Belleville	Sheriff	Wm. Hope	5585 24	
		Surrogate Judge	Judge Lazier	920 80	
		Local Master	S. S. Lazier	2588 20	
		Deputy Registrar	"	687 80	
		County Attorney	Geo. E. Henderson, Q.C	646 75	
		Clerk of the Peace	"	1350 69	
		Deputy Clerk of the Crown	A. G. Northrup	602 50	450 00
		County Court Clerk	"	1457 29	
		Surrogate Registrar	"	535 04	
Huron	Goderich	Sheriff	R. Gibbons	4543 90	
		Surrogate Judge	Judge Toms	471 50	
		Local Master and Deputy Registrar	H. McDermott and S. Malcolmson	commuted at	
		County Attorney	Ira Lewis	225 04	
		Clerk of the Peace	"	1340 00	
		Deputy Clerk of the Crown	D. McDonald	507 33	500 00
		County Court Clerk	"	1141 53	
		Surrogate Registrar	"	653 05	
Kent	Chatham	Sheriff	John Mercer	4232 81	
		Surrogate Judge	Judge Bell	212 50	
		Local Master	R. O'Hara	1041 74	
		Deputy Registrar	"	306 86	
		County Attorney	Wm. Douglas, Q.C	963 80	
		Clerk of the Peace	"	1378 30	
		Deputy Clerk of the Crown	W. A. Campbell	136 50	450 00
		County Court Clerk	"	925 60	
		Surrogate Registrar	"	369 05	
Lambton	Sarnia	Sheriff	Jas. Flintoft	3628 55	

different County Judicial Officers in the Province of Ontario.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
278 79	.....	278 79	.....	278 79	.....	125 00	153 79	....	
427 61	1358 60	427 61	.....	427 61	1358 60	125 00	302 61	983 60	
.....	5585 24	3765 68	1375 51	.....	5141 19	1862 21	3278 98	3723 03	
.....	920 80	920 80	.....	.....	920 80	.....	920 80	920 80	
2588 20	.....	2127 00	114 30	2241 30	.....	330 00	1911 30	.....	
687 80	3276 00	645 10	13 30	658 40	2899 70	330 00	328 40	2616 00	
646 75	.....	646 75	.....	646 75	.....	100 00	546 75	.....	
1350 69	1997 44	1250 69	.....	1250 69	1897 44	400 00	850 69	1497 44	
1052 50	.....	882 50	.....	882 50	.....	35 00	847 50	.....	
1457 29	.....	907 29	.....	907 29	.....	220 00	687 29	.....	
535 04	3045 83	436 43	.....	436 43	2226 22	200 00	236 43	2590 83	
.....	4543 90	4098 40	447 19	.....	4545 59	2143 20	2402 39	2400 70	
.....	471 50	471 50	.....	.....	471 50	.....	471 50	471 50	
.....	2500 00	2500 00	.....	.....	2500 00	.....	.....	2500 00	
225 04	.....	222 07	133 71	355 78	.....	20 00	335 78	.....	
1340 00	1565 04	1340 00	85 50	1425 50	1781 28	525 00	900 50	1020 04	
1007 33	.....	1007 33	.....	1007 33	.....	21 00	986 33	.....	
1141 53	.....	1141 53	.....	1141 53	.....	10 00	1131 53	.....	
653 05	2801 91	653 05	.....	653 05	2801 91	46 50	606 55	2724 41	
.....	4232 81	3007 65	1259 25	.....	4266 90	1848 10	2418 80	2384 71	
.....	212 50	212 50	.....	.....	212 50	.....	212 50	212 50	
1041 74	.....	1041 74	.....	1041 74	.....	10 00	1031 74	.....	
306 86	1348 60	306 86	.....	306 86	1348 60	.....	306 86	1338 60	
963 80	.....	810 25	175 00	985 25	.....	200 00	785 25	.....	
1378 30	2342 10	1378 30	.....	1378 30	2363 55	150 00	1228 30	1992 10	
586 50	.....	586 50	.....	586 50	.....	15 00	571 50	.....	
925 60	.....	870 00	63 00	933 00	.....	392 00	541 00	.....	
369 05	1881 15	336 55	12 00	348 55	1788 05	32 50	316 05	1441 65	
.....	3628 55	2373 32	545 25	.....	2918 57	1588 26	1330 31	2040 29	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

County or District.	County Town.	Office.	Officer.	Amount earned.	Salary paid by the Government.
				$ c.	$ c.
Lambton.—*Con*...	Sarnia.....	Surrogate Judge	Judge Robinson.....	307 00	.....
		Local Master	"	189 08	.. .. ..
		County Attorney.....	J. P. Bucke.....	585 55	.....
		Clerk of the Peace	"	1282 80	.....
		Local Registrar.....	W. R. Gemmill..... .	309 30	675 00
		County Court Clerk.....	"	651 40	.....
		Surrogate Registrar.....	"	551 10	.....
Lanark.....	Perth.....	Sheriff	Jas. Thompson.....	1391 99	... .
		Surrogate Judge	Judge Senkler.....	225 20	.....
		Local Master	"	228 10	.....
		County Attorney..... ...	E. G. Malloch.....	418 81	.....
		Clerk of the Peace.....	"	464 57	.....
		Local Registrar.....	Charles Rice.....	88 50	675 00
		County Court Clerk.....	"	228 40	.....
		Surrogate Registrar.....	"	290 31	.....
Leeds & Grenville,	Brockville	Sheriff	James Smart.....	2733 22	.....
		Surrogate Registrar	Judge Macdonald	Commuted at	
		Local Master	J. D. Buell..	247 88	.....
		Deputy Registrar	"	91 80	.....
		County Attorney.....	"	163 74	.....
		Clerk of the Peace.....	"	722 58	.....
		Deputy Clerk of the Crown	S. Reynolds.....	112 65	500 00
		County Court Clerk.....	"	578 20	.....
		Surrogate Registrar.....	"	621 50	.....
Lennox and Addington	Napanee.....	Sheriff	O. T. Pruyn.....	1973 04	.....
		Surrogate Judge	Judge Wilkinson.....	553 50	.....
		Local Master	S. S. Lazier.....	567 30	.....
		Deputy Registrar	"	144 20	.....
		County Attorney.....	A. L. Morden.....	106 00	.....
		Clerk of the Peace.....	"	605 25	.....
		Deputy Clerk of the Crown	J. B. McGuin.....	144 60	400 00

different County Judicial Officers in the Province of Ontario.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
307 00	.....	307 00	.....	307 00	.....	.....	307 00	.....	
189 08	496 08	189 08	.....	189 08	496 08	.....	189 08	496 08	
585 55	.....	440 65	103 00	543 65	.....	5 28	538 37	.....	
1282 80	1868 35	1189 60	72 87	1116 73	1660 38	.....	1116 73	1863 07	
984 30	.....	984 30	.....	984 30	.....	20 00	964 30	.....	
651 40	.....	651 40	.....	651 40	.....	20 00	631 40	.....	
551 10	2186 80	551 10	.....	551 10	2186 80	20 00	531 10	2126 80	
.....	1391 99	956 35	512 38	.....	1468 73	418 69	1050 04	973 30	
225 20	.....	203 20	.....	203 20	.....	.....	203 20	.....	
228 10	453 30	118 50	23 90	142 40	345 60	.....	142 40	453 30	
418 81	.....	204 15	118 75	322 90	.....	10 00	312 90	.....	
464 67	883 38	432 32	210 38	642 69	965 59	50 40	492 29	822 98	
763 50	.....	723 40	75 60	799 00	.....	5 65	793 35	.....	
228 40	.....	158 00	79 95	237 95	.....	4 64	233 31	.....	
290 31	1282 21	202 96	49 22	252 18	1289 13	10 00	242 18	1261 92	
.....	2733 22	2139 57	1010 90	.....	3150 47	859 88	2290 59	1873 34	
.....	480 00	480 00	.....	.....	480 00	.....	.....	480 00	
247 88	.....	18 60	170 21	188 81	.....	.....	188 81	.....	
91 80	.....	33 95	7 00	40 95	.....	.....	40 95	.....	
163 74	.....	126 36	126 82	253 18	.....	.....	253 18	.....	
722 58	1226 00	355 77	310 02	665 79	1148 73	166 73	499 06	1059 27	
612 65	.....	612 65	.....	612 65	.....	5 00	607 65	.....	
578 20	.....	578 20	.....	578 20	.....	20 00	558 20	.....	
621 50	1812 35	621 50	.....	621 50	1812 35	55 00	566 50	1732 35	
.....	1973 04	1620 75	529 91	.....	2150 46	1125 38	1025 28	847 66	
.....	553 50	553 50	.....	.....	553 50	.....	553 50	553 50	
567 30	.....	530 80	29 10	559 90	.....	75 00	484 90	.....	
144 20	711 50	143 90	7 90	151 10	711 00	50 00	101 10	586 50	
106 00	.....	71 00	23 00	94 00	.....	8 00	86 00	.....	
605 25	711 25	381 49	260 41	641 90	735 90	64 00	577 90	639 25	
544 60	.....	513 55	9 80	523 35	.....	4 30	519 05	.....	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

COUNTY OR DISTRICT.	COUNTY TOWN.	OFFICE.	OFFICER.	Amount Earned.	Salary paid by the Government.
				$ c.	$ c.
Lennox and Addington—*Con*...	Napanee.....	County Court Clerk.....	J. B. McGuin.....	424 53	.....
		Surrogate Registrar	"	296 59	.....
Lincoln	St. Catharines..	Sheriff.....	*Vacant*	2978 18	.....
		Surrogate Judge	Judge Senkler.....	commuted at	
		Local Master	F. W. McDonald.....	776 03	.....
		Deputy Registrar	"	408 44	.....
		County Attorney.....	John McKeown.....	381 50	.....
		Cleark of the Peace	"	860 59	.....
		Deputy Clerk of the Crown	J. Clench	304 10	450 00
		County Court Clerk	"	442 88	.....
		Surrogate Registrar.....	"	413 88	.....
Middlesex.....	London.....	Sheriff.....	William Glass.....	5175 37	.....
		Surrogate Judge	Judge Elliott.....	commuted at	
		Local Master	James Shanly.....	1332 37	.....
		Deputy Registrar..	"	588 77	.....
		County Attorney	Chas. Hutchison.....	1830 55	.....
		Clerk of the Peace	"	1993 30	.....
		Deputy Clerk of the Crown	John Macbeth	752 60	500 00
		County Court Clerk.....	"	2166 10	.....
		Surrogate Registrar.....	"	1232 30	.....
Norfolk	Simcoe	Sheriff.	E. Deedes	2888 04	.....
		Surrogate Judge	Judge Livingston.....	117 50	.....
		County Attorney	J. H. Ansley.....	154 00	.....
		Clerk of the Peace	"	752 11	.....
		Local Master	C. C. Rapelje.....	342 60	.....
		Local Registrar.....	"	67 40	675 00
		County Court Clerk.....	"	573 00	.....
		Surrogate Registrar.....	"	300 60	.....
Northumberland & Durham.....	Cobourg	Sheriff.....	I. O. Proctor.....	5385 07	.....
		Surrogate Judge	Judge Clark	commuted at	

different County Judical Officers in the Province of Ontario.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
424 53	.....	335 63	101 53	437 16	.....	3 50	433 66	.....	
296 59	1265 72	285 46	70 22	355 68	1316 19	8 85	346 83	1249 07	
2978 19	2978 19	2251 93	649 17	.....	2901 10	1283 85	1617 25	1694 34	
.....	566 00	566 00	.....	.....	566 00	.....	.....	566 00	
776 03	.....	638 38	81 65	720 03	.....	15 00	705 03	.....	
408 44	1184 47	349 84	112 80	462 64	1182 67	.....	462 64	1169 47	
381 50	.....	381 50	.....	381 50	.....	13 50	368 00	.....	
860 59	1242 09	860 59	.....	860 59	.....	114 75	745 84	1114 84	
754 10	.....	754 10	.....	754 10	.....	5 51	748 59	.....	
442 88	.....	409 83	86 80	496 63	.....	5 00	491 63	.....	
413 88	1610 86	413 88	.....	413 88	1664 61	52 97	360 91	1547 38	
.....	5175 37	4725 64	680 31	.....	5405 95	2882 70	2523 25	2292 67	
.....	1000 00	1000 00	.....	.....	1000 00	.....	.....	1000 00	
1332 37	.....	960 05	405 80	1365 85	.....	120 56	1245 29	.....	
588 77	1921 14	548 37	.....	548 37	1914 22	338 00	210 37	1462 58	
1830 55	.....	1302 58	641 93	1944 51	.....	153 80	1790 71	.....	
1993 30	3723 85	1274 88	729 40	2004 28	3948 79	710 63	1293 65	2859 42	
1252 60	.....	1153 70	30 65	1184 35	.....	376 65	807 70	.....	
2166 10	.....	2080 20	8 40	2088 60	.....	376 65	1711 95	.....	
1232 30	4651 00	1220 90	13 55	1234 45	4507 40	376 65	857 80	3521 05	
.....	2888 04	2169 72	791 85	.....	2961 57	1129 68	1831 89	1758 36	
.....	117 50	117 50	.....	.....	117 50	.....	117 50	117 50	
154 00	.....	154 00	.....	154 00	.....	7 00	147 00	.....	
752 11	906 11	686 35	.....	686 35	840 35	51 77	788 58	847 34	
342 60	.....	325 01	87 00	412 01	.....	3 50	408 51	.....	
742 40	.....	729 50	12 00	741 50	.....	.....	741 50	.....	
573 00	.....	505 96	75 05	581 01	.....	4 70	576 31	.....	
300 60	1958 60	290 80	45 10	335 90	2070 42	8 55	327 35	1941 85	
.....	5385 07	3454 95	1147 60	.....	4602 55	2559 32	2043 23	2825 75	
.....	600 00	600 00	.....	600 00	.....	.....	600 00	.....	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

County or District.	County Town.	Office.	Officer.	Amount Earned.	Salary paid by the Government.
				$ c.	$ c.
Northumberland & Durham—*Con* ..	Cobourg	Local Master	Judge Clark	1387 11	.....
		County Attorney	J. W. Kerr.....	514 56	.....
		Clerk of the Peace	"	1073 75	.....
		Local Registrar..... ...	John Fisher.....	202 70	750 00
		County Court Clerk.....	"	1086 60	.....
		Surrogate Registrar.....	"	733 64	.....
Ontario	Whitby	Sheriff.....	Thomas Paxton.....	3183 28	.....
		Surrogate Judge	Judge Burnham.....	commuted at	
		Local Master	Judge Dartnell	713 15	.....
		County Attorney.....	J. E. Farewell	382 81	.....
		Clerk of the Peace	"	1361 73	.....
		Local Registrar.....	L. T. Barclay.....	225 70	675 00
		County Court Clerk.....	"	703 75	.....
		Surrogate Registrar... ...	"	762 00	.....
Oxford.....	Woodstock	Sheriff.....	George Perry	2547 15	.....
		Surrogate Judge	Judge Finkle	468 50	.....
		Local Master	H. B. Beard, Q.C....	458 80	.....
		Deputy Registrar	"	374 20	.....
		County Attorney.....	F. R. Ball, Q.C.....	313 10	.....
		Clerk of the Peace	"	844 23	.....
		Deputy Clerk of the Crown	James Canfield	331 20	450 00
		County Court Clerk.....	"	834 70	.....
		Surrogate Registrar	"	861 75	.....
Peel...	Brampton	Sheriff.....	Robert Broddy.	2533 71	....
		Surrogate Judge	Judge Scott.....	commuted at	
		Local Master	"	431 10	.....
		County Attorney...	W. H. McFadden....	77 00	.....
		Clerk of the Peace	"	577 87	.....
		Local Registrar..... ..	J. A. Austin.....	107 55	600 00

different County Judicial Officers in the Province of Ontario, etc.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1387 11	1987 11	792 87	434 22	1227 09	1827 09	374 00	853 09	1613 11	
514 56	....	344 56	.....	344 56	.....	150 00	194 56	.....	
1073 75	1588 31	948 75	.....	948 75	1293 31	200 00	748 75	1238 31	
952 70	.....	908 20	24 90	933 10	.... ..	135 00	798 10	.....	
1086 60	.....	563 35	219 65	783 00	.....	410 00	373 00	.....	
733 64	2772 94	570.75	91 00	661 75	2377 85	96 76	564 99	2131 18	
.....	3183 28	2476 78	833 48	.....	3310 26	1823 54	1486 72	1359 74	
....	540 00	540 00	....	.....	540 00	.....	.....	540 00	
.....	713 15	713 15	.....	.....	713 15	30 00	683 15	683 15	
382 81	.....	342 15	102 75	444 90	.....	114 89	330 01	.....	
1361 73	1744 54	764 08	476 24	1240 32	1685 12	302 25	938 07	1327 40	
900 70	.....	900 70	.....	900 70	.....	45 00	855 70	.....	
703 75	.....	689 65	15 00	704 65	.....	45 00	659 65	.....	
762 00	2366 45	725 20	11 00	736 20	2341 55	90 00	646 20	2186 45	
.....	2547 15	2007 85	525 61	.....	2533 46	1083 98	1449 48	1463 17	
.....	468 50	468 50	.....	.....	468 50	.....	468 50	468 50	
458 80	.....	458 80	.....	458 80	.....	..... .	458 80	.....	
374 20	833 00	374 20	....	374 20	833 00	.....	374 20	833 00	
313 10	.....	269 20	70 90	340 10	.....	25 00	315 10	.....	
844 23	1157 33	571 71	380 57	952 28	1292 38	20 60	931 68	1111 73	
781 20	.....	702 90	10 50	713 40	.....	5 50	707 90	.....	
834 70	.....	659 20	182 50	841 70	.....	10 30	831 40	.....	
861 75	2477 65	633 95	218 30	852 25	2407 35	9 25	843 00	2452 60	
....	2533 71	2180 00	514 30	.....	2694 30	1091 53	1602 77	1442 18	
240 00	.....	240 00	.....	240 00	.....	.....	240 00	.....	
431 10	671 10	379 10	12 00	391 10	631 10	20 00	371 10	651 10	
77 00	.....	67 00	9 00	76 00	.....	10 00	66 00	.....	
577 87	654 87	459 89	104 31	564 20	640 20	40 00	524 20	604 87	
707 55	.....	706 70	.....	706 70	.....	6 85	699 85	.....	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

County or District.	County Town.	Office.	Officer.	Amount Earned.	Salary paid by the Government.
				$ c.	$ c.
Peel—*Continued* ..	Brampton	County Court Clerk	J. A. Austin.....	324 48	.....
		Surrogate Registrar.....	"	512 44	.....
Perth	Stratford.. ...	Sheriff	John Hossie	3802 61	....
		Surrogate Judge.....	Judge Lizars.....	501 60	....
		Local Master	"	460 05	.....
		County Attorney	John Idington, Q.C..	717 40	.....
		Clerk of the Peace.	"	763 30	.... ..
		Local Registrar.....	Jas. McFadden	386 95	675 00
		County Court Clerk.....	"	552 05	.....
		Surrogate Registrar.....	"	675 20	.....
Peterboro'	Peterboro'.....	Sheriff	Jas. A. Hall.....	2030 95	....
		Surrogate Judge.....	Judge Weller	436 50	.....
		Local Master..... ...	"	612 05	.....
		County Attorney	Robert E. Wood.....	93 00	....
		Clerk of the Peace.	"	607 20	.....
		Local Registrar.....	John Moloney	151 90	450 00
		County Court Clerk.....	"	547 11	.....
		Surrogate Registrar.....	"	294 05	....
Prescott & Russell	L'Orignal	Sheriff	J. D. Merrick	2781 57	.....
		Surrogate Judge.....	Judge Daniell.....	Commuted at	
		Local Master.....	"	102 00	.....
		County Attorney	John Maxwell	185 89	.....
		Clerk of the Peace.....	"	1014 31	.... ..
		Local Registrar.....	John Fraser	107 00	675 00
		County Court Clerk.....	"	282 56	. . . .
		Surrogate Registrar.....	"	74 89	.....
Prince Edward ...	Picton	Sheriff	Jas. Gillespie	2015 85	.....
		Surrogate Judge.....	Judge Jellett	211 10	.....
		Local Master	"	613 61	.....
		County Attorney	Philip Low, Q.C	61 00	.....

different County Judicial Officers in the Province of Ontario, etc.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
324 48	.....	318 13	19 50	337 63	.....	60 00	331 63	.....	
512 44	1544 47	505 59	29 80	535 39	1579 72	20 15	515 24	1511 47	
.....	3802 61	3066 32	548 90	.....	3615 22	1307 05	2308 17	2495 56	
501 60	.....	501 60	.....	501 60	.....	.....	501 60	.....	
460 05	961 65	201 10	242 97	444 07	945 67	15 85	428 22	945 80	
717 40	.....	586 40	86 00	672 40	.....	23 85	648 55	.....	
763 30	1480 70	395 98	289 67	685 65	1358 05	285 10	400 55	1171 75	
1061 95	.....	1061 95	56 87	1118 82	.....	100 00	1018 82	.....	
562 05	.....	562 05	55 57	617 62	.....	100 00	517 62	.....	
675 20	2299 20	659 90	.....	659 90	2396 34	100 00	559 90	1979 20	
.....	2030 95	1810 84	12 95	.....	1823 79	324 58	1499 21	1706 37	
436 50	.....	436 50	.....	436 50	.....	.....	436 50	.....	
612 05	1048 55	612 05	.....	612 05	1048 55	.....	612 05	1048 55	
93 00	.....	93 00	.....	93 00	.....	.....	93 00	.....	Since date of appointment, 1886.
607 20	700 20	607 20	.....	607 20	700 20	5 00	602 20	695 20	
601 90	.....	601 90	.....	601 90	.....	35 00	566 90	.....	
547 11	.....	505 76	.....	505 76	.....	25 00	480 76	.....	
294 05	1443 06	294 05	.....	294 05	1401 71	.....	294 05	1383 06	
.....	2781 57	1828 50	535 90	.....	2364 40	891 62	1472 78	1889 95	
120 00	.....	120 00	.....	120 00	.....	.....	120 00	.....	
102 00	222 00	42 00	.....	42 00	162 00	.....	42 00	222 00	
185 89	.....	185 89	.....	185 89	.....	37 35	148 54	.....	
1014 31	1200 20	920 61	45 00	965 61	1151 50	31 32	934 29	1082 83	
782 00	.....	742 00	16 00	758 00	.....	35 86	722 14	.....	
282 56	.....	219 46	27 00	246 46	.....	15 00	231 46	.....	
74 89	1139 45	61 42	.....	61 42	1186 52	15 00	46 42	1073 59	
.....	2015 85	1681 89	410 91	.....	2092 80	1223 96	868 84	791 89	
211 10	.....	211 10	.....	211 10	.....	.....	211 10	.....	
613 61	824 71	259 23	48 10	307 33	518 43	.....	307 33	824 71	
61 00	.....	31 50	19 05	50 55	.....	.....	50 55	.....	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

County or District.	County Town.	Office.	Officer.	Amount Earned	Salary paid by the Government.
				$ c.	$ c.
Prince Edw'd-*Con.*	Picton	Clerk of the Peace	Philip Low, Q.C	513 80	... .
		Local Registrar	John Twigg	45 60	600 00
		County Court Clerk	"	383 63	.....
		Surrogate Registrar	"	227 51	.....
Rainy River	Rat Portage	Sheriff	John McQuarrie	521 10	800 00
		Dpty Clerk of the Crown	Frank J. Apjohn	*nil.*	.....
		District Court Clerk	"	20 38	650 00
		Surrogate Registrar	"	*nil.*	.....
Renfrew	Pembroke	Sheriff	James Morris	2343 69	.....
		Surrogate Judge	Judge Deacon	commuted at	
		Local Master	"	138 23	... .
		County Attorney	H. H. Loucks	206 10	.....
		Clerk of the Peace	"	881 02	.....
		Local Registrar	A. Thomson	144 90	600 00
		County Court Clerk	"	470 42	.....
		Surrogate Registrar	"	97 75	.....
Simcoe	Barrie	Sheriff	T. D. McConkey	8504 64	.....
		Surrogate Judge	Judge Ardagh	commuted at	
		Local Master	J. R. Cotter	1097 10	.....
		Deputy Registrar	"	354 90	.....
		County Attorney	"	776 90	.....
		Clerk of the Peace	"	1949 37	.....
		Dpty Clerk of the Crown	J. McL. Stevenson	442 80	500 00
		County Court Clerk	"	1160 23	.....
		Surrogate Registrar	"	818 20	.....
Stormont, Dundas and Glengarry	Cornwall	Sheriff	D. E. McIntyre	3714 86	.....
		Surrogate Judge	Judge Pringle	237 00	.....
		Local Master	"	757 10	.....
		County Attorney	James Dingwall	140 30	.. ....
		Clerk of the Peace	"	662 68	.....

different County Judicial Officers in the Province of Ontario.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
513 80	574 80	327 46	256 48	583 94	634 49	22 96	560 98	551 84	
645 60	.....	637 60	.....	637 60	.....	....	637 60	.....	
388 63	.....	356 93	75 50	432 43	.....	.....	432 43	.....	
227 51	1261 74	220 76	4 72	225 48	1295 51	.....	225 48	1261 74	
.....	1321 10	1043 88	49 65	. .....	1093 53	595 36	498 17	725 74	
....	... .	.....	.....	.....	.....	.....	.....	.....	
.....	670 38	670 38	.. ....	.....	670 38	.....	670 38	670 38	
.....	... ...	.....	.....	.....	.....	.....	.....	.....	
.....	2343 69	2141 15	58 62	.....	2199 77	1290 83	908 94	1052 86	
264 00	.....	264 00	.....	264 00	.....	.....	264 00	.....	
138 23	402 23	138 23	.....	138 23	402 23	17	138 06	402 06	
206 10	...	206 10	... .	206 10	.....	11 00	195 10	....	
881 02	1087 12	881 02	30 00	911 02	1117 12	37 60	873 42	1038 52	
744 90	.....	744 90	.....	744 90	.....	1 75	743 15	.....	
470 42	.....	470 42	.....	470 42	.....	2 50	467 92	.....	
97 75	1313 07	97 75	.....	97 75	1313 07	5 00	92 75	1303 82	
....	8504 64	7911 67	1529 53	.....	9441 20	5473 88	3967 32	3030 76	
.. ..	479 00	.....	.....	.....	479 00	.....	479 00	479 00	
1097 10	.....	1097 10	.....	1097 10	.....	48 00	1049 10	.....	
354 90	.....	354 90	.....	354 90	.....	57 00	297 90	.....	
776 90	.....	776 90	.....	776 90	.....	46 00	730 90	.....	
1949 37	4178 27	1949 37	... ..	1949 37	4178 27	65 00	1884 37	3962 27	
942 80	.....	942 80	.....	942 80	.....	94 28	848 52	.....	
1160 23	... .	1160 23	.....	1160 23	.....	116 02	1044 21	.....	
818 20	2921 23	818 20	....	818 20	2921 23	81 82	736 38	2629 11	
.....	3714 86	2552 50	446 11	.....	2998 61	937 46	2061 15	2777 40	
237 00	.....	237 00	.....	237 00	.....	.....	237 00	.....	
757 10	994 10	757 10	.....	757 10	994 10	.....	757 10	994 10	
140 30	.. ..	98 18	128 67	226 85	.....	45 11	181 74	.....	
662 68	802 98	328 36	233 37	561 73	788 58	33 90	527 83	713 97	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

County or District.	County Town.	Office.	Officer.	Amount Earned.	Salary paid by the Government.
				$ c.	$ c.
Stormont, Dundas & Glengarry.-*Con.*	Cornwall	Local Registrar	Alex. E. Macdonald	206 00	750 00
		County Court Clerk	"	743 53	
		Surrogate Registrar	"	342 20	
Thunder Bay	Port Arthur	Sheriff	J. F. Clarke	2941 18	1000 00
		Surrogate Judge	Judge Hamilton	13 00	
		Local Master	"	240 00	
		County Attorney	A. R. Lewis	404 29	
		Clerk of the Peace	"	441 36	
		Local Registrar	C. Kreissman	94 20	600 00
		District Court Clerk	"	695 14	
		Surrogate Registrar	"	21 30	
Victoria	Lindsay	Sheriff	John McLennan	2866 30	
		Surrogate Judge	Judge Dean	commuted at	
		Local Master	"	commuted at	
		County Attorney	A. P. Devlin	123 56	
		Clerk of the Peace	"	699 31	
		Local Registrar	William Grace	294 30	675 00
		County Court Clerk	"	575 00	
		Surrogate Registrar	"	206 50	
Waterloo	Berlin	Sheriff	Moses Springer	2469 53	
		Surrogate Judge	Judge Miller	commuted at	
		Local Master	Judge Lacourse	commuted at	
		County Attorney	W. H. Bowlby	244 20	
		Clerk of the Peace	"	1215 25	
		Local Registrar	John McDougall	164 75	1075 00
		County Court Clerk	"	296 92	
		Surrogate Registrar	A. J. Peterson	803 11	
Welland	Welland	Sheriff	George J. Duncan	3214 34	
		Surrogate Judge	Judge Baxter	401 70	
		Local Master	"	137 66	

different County Judicial Officers in the Province of Ontario.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
956 00	.....	956 00	.....	956 00	.....	53 22	902 78	.....	
743 53	.... ..	593 33	157 25	750 78	.....	53 22	697 56	.....	
342 20	2041 73	342 20	.....	342 20	2048 98	53 23	288 97	1882 06	
... ...	3941 18	3742 29	278 38	.....	4020 67	2274 81	1745 86	1666 37	
13 00	.....	13 00	.....	13 00	.....	.....	13 00	.....	
240 00	253 00	240 00	217 50	457 50	470 50	22 50	435 00	230 50	
404 29	....	353 29	233 65	486 94	.....	.....	486 94	.....	
441 36	845 65	353 81	298 97	652 78	1139 72	52 56	600 22	793 09	
694 20	.....	694 20	.....	694 20	.....	2 50	691 70	....	
695 14	.....	613 59	66 90	680 49	.....	74 00	606 49	.....	
21 30	1410 64	21 30	.....	21 30	1395 99	1 00	20 30	1334 14	
.....	2866 30	2079 43	687 87	.....	2767 30	606 06	2161 24	2260 24	
500 00	.....	500 00	.....	500 00	....	.....	500 00	.....	
900 00	1400 00	900 00	.....	900 00	1400 00	.....	900 00	1400 00	
123 56	.....	61 30	70 90	132 20	.....	.....	132 20	.....	
699 31	822 87	405 00	319 30	724 30	856 50	.....	724 30	822 87	
969 30	.....	925 00	175 00	1100 00	.....	27 00	1073 00	.....	
575 00	.....	510 00	93 00	603 00	.....	32 50	570 50	.....	
206 50	1750 80	206 50	26 00	232 50	1935 50	17 50	215 00	1673 80	
.....	2469 53	2236 33	307 98	.....	2544 31	1069 15	1475 16	1400 38	
....	704 00	.....	....	.....	704 00	.....	.....	704 00	
.....	591 00	.....	.. ....	.....	591 00	.....	.....	591 00	
244 20	.....	244 20	.....	244 20	.....	.....	244 20	.....	
1215 25	1459 45	1215 25	.....	1215 25	1459 45	400 00	815 25	1059 45	
1239 75	.....	1213 60	.....	1213 60	.....	20 00	1193 60	.....	
296 92	1536 67	296 92	.....	296 92	1510 52	30 00	266 92	1486 67	
.....	803 11	803 11	.....	.....	803 11	126 50	776 61	776 61	
... ..	3214 34	1906 44	608 00	.....	2514 44	1610 86	903 58	1603 48	
401 70	.....	401 70	.....	401 70	.....	.....	401 70	.....	
137 66	539 36	22 26	27 70	49 96	451 66	6 00	43 06	533 36	

APPENDIX L.—Schedule shewing Return of Fees and Emoluments of the

County or District.	County Town.	Office.	Officer.	Amount earned.	Salary paid by the Government.
				$ c.	$ c.
Welland—*Con*....	Welland.....	County Attorney.....	L. D. Raymond.....	242 40	.....
		Clerk of the Peace	"	834 33	.....
		Local Registrar	I. P. Willson	322 80	1000 00
		County Court Clerk.....	"	276 70	.....
		Surrogate Registrar.....	D. D'Everardo ...	570 20	.....
Wellington.....	Guelph	Sheriff.....	*Vacant*	3134 36	.....
		Surrogate Judge	Judge Drew	commuted at	
		Local Master	A. M. McKinnon....	1266 78	.....
		Deputy Registrar.....	"	345 35	.....
		County Attorney	H. W. Peterson.....	597 10	.....
		Clerk of the Peace	"	1841 00	.....
		Deputy Clerk of the Crown	James Hough.....	210 80	500 00
		County Court Clerk.....	"	846 00	.....
		Surrogate Registrar.....	Alex. Mackenzie.....	857 18	.....
Wentworth	Hamilton.....	Sheriff.....	Hon. A. McKellar...	4500 36	.....
		Surrogate Judge..... ..	Judge Sinclair.....	commuted at	
		Local Master.....	Miles O'Reilly, Q.C..	commuted at	
		Local Master and Deputy Registrar	J. E. O'Reilly		
		County Attorney	John Crerar	820 90	.....
		Clerk of the Peace	"	771 63	.....
		Deputy Clerk of the Crown	S. H. Ghent	520 45	500 00
		County Court Clerk.....	"	1475 85	.....
		Surrogate Registrar.....	"	939 24	.....
York	Toronto	Sheriff.....	F. W. Jarvis	19526 66	.....
		Surrogate Judge	Judge McDougall....	1680 10	.....
		"	Judge Morgan.....	.. ..	666 00
		County Attorney	*Vacant*	No returns	
		Clerk of the Peace	T. H. Bull.....	2723 15	.....
		Surrogate Registrar.....	J. G. Brown.....	3019 12	.....
		County Court Clerk.....	Walter McKenzie....	4370 60	.....

different County Judicial Officers in the Province of Ontario.—*Continued.*

Total Earnings and Salary.	Total Earnings and Salary by officer in all his offices.	Amount received for present year.	Amount received for previous years.	Total receipts.	Total receipts by officer from all his offices.	Amount disbursed.	Net amount received.	Net amount due to or received by officer by virtue of all his offices.	Remarks.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
242 40	.....	163 40	79 00	242 40	.....	23 00	219 40	.....	
834 33	1076 73	464 99	380 14	845 13	1087 53	37 68	807 45	1016 05	
1322 80	.....	1298 50	3 80	1302 30	.....	30 59	1271 71	.....	
276 70	1599 50	261 90	3 25	265 15	1567 45	8 40	256 75	1560 51	
.....	570 20	512 30	80 75	.....	593 05	286 30	306 75	283 90	
.....	3134 36	1927 27	594 53	.....	2521 80	1228 71	1193 09	1905 65	
.....	505 00	505 00	.....	.....	505 00	.....	.....	505 00	
1266 78	.....	1138 29	201 65	1339 94	.....	13 50	1326 44	.....	
345 35	1612 13	295 90	103 35	399 25	1739 19	13 50	385 75	1585 13	
597 10	.....	439 70	152 50	592 20	.....	115 00	477 20	.....	
1841 00	2438 10	1219 49	677 79	1897 28	2489 48	444 04	1453 24	1879 06	
710 80	.....	710 80	.....	710 80	.....	12	710 68	.....	
846 00	1556 80	841 30	1 55	842 85	.....	523 25	319 60	1033 43	
.....	857 18	802 48	73 59	.....	876 07	.....	876 07	857 18	
.....	4500 36	3431 37	1422 91	.....	4854 28	2071 15	2783 13	2429 21	
.....	1000 00	1000 00	.....	.....	1000 00	.....	.....	1000 00	
.....	4500 00	4500 00	.....	.....	4500 00	.....	.....	4500 00	
820 90	.....	820 00	135 90	955 90	.....	.....	955 90	.....	
771 63	1592 53	771 63	.....	771 63	1727 53	.....	771 63	1592 53	
1020 45	.....	993 75	83 20	1076 95	.....	.....	1076 95	.....	
1475 85	.....	1213 45	176 25	1389 70	.....	264 50	1125 20	.....	
939 24	3435 54	899 19	.....	899 19	3365 84	123 64	775 55	3047 40	
.....	19526 06	19319 79	.....	.....	19319 79	9649 11	9670 68	9876 95	
.....	1680 10	1680 10	.....	.....	1680 10	.....	.....	1680 10	
.....	666 00	666 00	.....	.....	666 00	.....	.....	666 00	
made	.....	.....	.....	.....	.....	.....	.....	.....	
.....	2723 15	1533 82	876 17	.....	2409 99	590 00	1819 99	2133 15	
.....	3019 12	2990 22	66 00	.....	3056 22	543 20	3513 02	2475 42	
.....	4370 60	4356 25	7 75	.....	4364 00	1296 44	3067 56	3074 16	

ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

FOR THE

PROVINCE OF ONTARIO,

1886.

Printed by Order of the Legislative Assembly.

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1887.

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FIFTH ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

To the Honorable Alexander M. Ross, Commissioner of Agriculture :

Sir,—I have the honor to submit herewith the fifth annual report of the Bureau of Industries for the Province of Ontario, consisting of—

I. The Weather and the Crops ;

II. Live Stock, the Dairy and the Apiary ;

III. Values, Rents and Wages ;

IV. Statistics of Schools, Population, Trade, etc., and

V. Mines and Mining Operations.

I have the honor to be, Sir,

Your obedient servant,

A. BLUE, Secretary.

PART I.

THE WEATHER AND THE CROPS.

THE WEATHER.

The weather of 1886 does not to any marked extent differ from the average of the records of five years. The annual mean of temperature at each of eight stations whose registers are given in Table I varies from the annual average of the five years 1882-6 in Table II by less than one degree, and for two others only by a degree and one-tenth—the year's mean being higher than the five years' mean at every station. The aggregate of sunshine is higher than the annual average at seven stations, as appears by comparison of Tables III and IV, but for the whole province the aggregate of 1886 exceeds the annual average only by 38.5 hours. The precipitation compared by districts in Tables V and VI shows that rainfall was greater in the central and eastern for the year than for the period, while in the central and northwestern districts the snowfall was less; but in the total precipitation over the province the difference is slight, being 33.84 inches for the year and 33.63 inches for the period. It thus appears that in temperature, sunshine and precipitation the record of 1886 is a little higher than the average of five years. Taking the average of the five years, the lowest temperature was reached in January, and the highest in July; the highest register of sunshine in July, and the lowest in December; the greatest precipitation in January, and the lowest in April.

So close is the dependence of plant life on conditions of weather that, in a general way, the quantity and quality of crops may be determined from the records of temperature, precipitation and sunshine. In ordinary years the records of the season of growth and maturity are alone of interest as regards field and orchard crops; but occasionally the winter effects are serious, especially on fall wheat and the fruit-buds. Over a portion of the province last year the fall wheat was badly winter-killed, and the cause is clearly indicated by the weather tables: much of the precipitation fell as rain instead of snow, and while the wheat plants were thus left with less than the usual covering, the cold was more than usually severe. The following table shows the rainfall and snowfall of the province by districts for the first three months of the year, together with the average of each for five years:

Months.		West and S.W.		N.W. and North.		Centre.		East and N.E.	
		1886.	1882-6.	1886.	1882-6.	1886.	1882-6.	1886.	1882-6.
		Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.
January....	Rain	1.99	1.05	1.43	1.03	2.35	1.15	1.74	0.81
	Snow	22.10	17.60	24.10	33.00	15.90	19.60	27.30	24.70
February...	Rain	1.18	1.56	0.82	0.75	1.75	1.30	0.89	0.75
	Snow	15.60	12.00	21.10	21.60	8.50	10.80	18.60	17.10
March	Rain	1.97	1.40	2.14	1.11	2.90	1.28	2.15	1.00
	Snow	6.90	12.40	11.60	14.80	3.90	11.10	14.40	16.10
Totals....	Rain	5.14	4.01	4.39	2.89	7.00	3.73	4.78	2.56
	Snow	44.60	42.00	56.80	69.40	28.30	41.50	60.30	57.90

In each of the districts the total rainfall of the three months of 1886 was considerably more than the average of five years, and the snowfall considerably less in all excepting the east and northeast district. In the centre district the rainfall of January was more than twice the average of five years, and nearly the same proportion is shown for the three months, while the snowfall was thirty per cent. less. Now for this district

the record of lowest temperature, as kept at four principal stations, was for the year and period respectively as follows :

Months.	Stratford.		Hamilton.		Toronto.		Barrie.	
	1886.	1882-6.	1886.	1882-6.	1886.	1882-6.	1886.	1882-6.
	Below σ	Below	Below σ	Below σ	Below σ	Below σ	Below σ	Below σ
January.....	13.2°F	21.7°F	7.5°F	12.8°F	13.8°F	13.6°F	20.4°F	29.1°F
February.....	21.3	15.3	14.7	7.8	22.8	9.2	28.9	15.8
March	9.8	11.7	4.5	3.7	7.3	2.6	16.8	13.9

The average of lowest temperature over this centre district, comparing 1886 with the average of the five years 1882-6, was as 13.7° to 19.3° below zero in January, as 21.9° to 12° below zero in February, and as 9.8° to 8° below zero in March. The heavy rainfall of January was followed by a drop of nearly 10° in February temperature below the average coldest in that month for five years, while the snowfall of February and March was 9½ inches less than the average of those months for five years : hence the widespread damage to wheat by winter-killing in the centre district last year. In the other districts of the province the rainfall was lighter, and greater protection was given to the plants by a deeper covering of snow.

Throughout the greater part of Ontario, however, the winter weather is so uniform one year after another that serious damage to wheat fields is a rare exception. More often the greatest injury is sustained in the months of March and April, when cold nights, warm days and east winds prevail. But taking a series of years, farm crops depend mainly on the character of the weather during the spring and summer months ; and although we may not know definitely what degrees of temperature and what proportions of rainfall and sunshine are best suited for the growth and maturity of the finest qualities of our cereals, roots and fruits, comparison of the crops of different years conjoined with careful study of the weather records in the various districts of the province will enable us to reach measurably safe conclusions for each locality.

It is, therefore, for the period of growth and maturity that weather records have their principal value, and in comparing one season with another, or one country with another, it will be found that in the products of the field, the orchard and the garden the chief governing factor is the weather. In the greater part of Ontario the season is usually embraced in the five months from May to September ; but in the southwestern counties vegetation often starts in April, and occasionally the season of growth and maturity over almost the whole of the settled portions of the province extends from April to October. Last year was one of the early seasons, as appears by the following table of mean temperature :

Stations.	April.		May.		June.		July.		August.		September.	
	1886	1882-6	1886	1882-6	1886	1882-6	1886	1882-6	1886	1882-6	1886	1882-6
	°	°	°	°	°	°	°	°	°	°	°	°
Windsor ..	50.1	45.4	58.3	55.7	66.4	67.2	71.3	71.5	69.5	68.6	63.9	63.9
Goderich ..	46.3	40.7	51.7	51.7	60.6	63.0	64.4	66.6	65.4	65.4	60.8	60.6
Simcoe	47.3	42.7	55.6	53.6	63.7	64.6	68.0	68.7	66.1	66.0	60.3	60.4
Stratford..	46.2	40.6	54.4	51.9	61.9	63.2	65.7	65.8	65.0	63.2	58.2	58.0
Hamilton .	45.9	42.3	56.4	52.7	64.1	64.2	70.4	69.4	69.4	68.1	63.1	61.8
Toronto ...	44.9	40.4	53.2	50.9	60.9	62.0	66.8	66.4	65.7	65.2	58.9	58.8
Barrie.....	44.8	38.9	53.7	51.4	62.9	62.8	68.6	67.3	66.4	65.3	59.0	58.7
Peterboro'.	47.3	41.6	54.7	54.2	64.7	65.3	69.0	69.0	66.5	66.6	58.6	59.3
Cornwall ..	45.2	39.7	56.6	53.5	64.0	64.3	69.1	67.1	68.4	66.1	58.9	57.7
Pembroke .	42.9	38.3	55.7	52.3	61.6	63.6	66.9	67.5	64.8	65.5	56.2	56.9
Province averages.	46.1	41.1	55.0	52.8	63.1	64.0	68.0	67.9	66.7	66.0	59.8	59.6

The average daily temperature of April was 5° higher than the average of that month for five years, and of May 2.2° higher; in June alone was the average daily temperature of the six months, April to September, lower than the average of five years, and for that month the difference was less than a degree. Barrie is the only one of the ten stations at which the average daily temperature was higher each month last year than the average of each corresponding month in the five years' period.

The rainfall of the six months last year, and the average of five years, is presented in the following table, by districts and for the whole province:

Districts.	April.		May.		June.		July.		August.		September	
	1886	1882-6	1886	1882-6	1886	1882-6	1886	1882-6	1886	1882-6	1886	1882-6
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
West and Southwest.	3.44	2.17	2.18	3.52	2.57	3.33	1.95	3.08	3.10	3.21	3.99	2.66
Northwest and North.	1.73	1.74	1.26	2.78	2.35	3.12	1.51	2.42	3.30	2.77	4.41	3.45
Centre	3.22	2.00	2.14	3.01	1.94	3.08	2.19	2.71	1.96	2.63	3.70	2.83
East and Northeast..	2.18	1.99	1.67	2.86	3.10	3.01	3.43	3.26	2.67	2.65	3.33	2.97
Province averages.	2.64	1.97	1.81	3.04	2.49	3.14	2.27	2.87	2.76	2.81	3.86	2.98

The average over the province for the six months was 15.83 inches last year, against 16.81 inches for five years; but in April and September it was last year considerably in excess of the average of five years. The May and June records show for last year a season of comparative drouth, whereas those of July and August differ but little from the average.

The record of sunshine is complete for five years at Toronto and Woodstock only; at each of the other stations in the following table it is complete for the four years 1883-6, saving that for the last year the Niagara peninsula station was located at Niagara Falls South instead of St. Catharines:

Stations.	April.		May.		June.		July.		August.		September.	
	1886	1883-6	1886	1883-6	1886	1883-6	1886	1883-6	1886	1883-6	1886	1883-6
	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.	Hrs.
Windsor	209.0	183.5	264.6	214.6	278.3	256.2	248.2	268.3	214.6	236.2	192.8	187.4
Woodstock ..	187.4	196.1	246.2	199.5	248.1	247.3	260.0	255.9	220.6	222.4	190.9	200.1
Stratford	193.9	168.5	250.5	182.1	216.3	244.2	271.3	256.2	225.8	239.7	163.5	170.0
Niagara Falls	168.3	145.7	229.2	189.2	253.8	252.3	236.3	245.1	227.1	237.7	195.3	190.0
Toronto	180.2	188.3	261.9	223 5	270.8	280.1	277.9	281.1	237.6	253.7	187.7	216.1
Barrie.....	167.5	161.9	246.9	201.8	228.4	243.1	246.3	249.8	201.4	212.9	157.8	157.6
Lindsay	214.9	200.5	263.2	223.9	253.2	273.0	269.4	272.8	234.8	237.5	193.8	212.8
Kingston....	201.8	178.4	232.6	215.1	216.3	244.1	228.8	244.3	238.3	250.1	186.9	209.1
Cornwall	212.8	206.4	226.2	224.0	218.8	249.9	262.9	250.5	262.9	249.0	176.8	197.0
Pembroke ...	212.6	156.7	165.1	177.9	127.5	205.3	216.7	227.7	204.3	215.3	177.5	153.5
Province averages.	194.8	188.6	238.6	205.2	231.2	269.5	251.8	255.2	226.7	235.4	182.3	189.4
Hours of sun above horizon	406.4		461.1		465.7		470.9		434.5		376.3	

The May record of last year exceeds the average of five years by 33.4 hours; but this is more than offset by the June record, which falls below the average by 38.3 hours. For the season of six months the mean of sunshine over the whole province gives an aggregate of 1325.4 hours last year, against an average aggregate of 1343.3 hours for the five years. As the hours of possible sunshine in the six months, calculated for the

latitude of Toronto, is 2614.9 hours, it appears that the actual is only fifty per cent. of the possible; for the months of June, July and August, however, it is fifty-seven per cent. of the possible, and these are the most important months in the life of our staple cereals.

FARM LANDS OF THE PROVINCE.

The areas of farm lands in the province are given by counties in the table of Population, as obtained by township assessors—classified as resident and non-resident, and showing the extent of cleared land, wood land, and swamp, marsh and waste land in each county. The areas by groups of counties for 1886, and the totals of the province for four successive years, are presented in the following table:

Districts.		Acres Assessed.			Acres cleared.	Acres wood land	Acres swamp, marsh or waste.	Per cent. cleared.
		Resident.	Non-Resident.	Total.				
Lake Erie.....		2,272,055	73,002	2,345,057	1,296,912	924,476	123,669	55 3
Lake Huron.....		2,162,051	113,399	2,275,450	1,196,469	894,129	184,852	52.6
Georgian Bay....		1,900,678	114,161	2,014,839	960,709	854,784	199,346	47.7
West Midland...		3,206,643	47,154	3,253,797	2,190,837	755,366	307,594	67.3
Lake Ontario....		3,001,698	47,889	3,049,587	2,241,017	586,295	222,275	73.5
St. Law. & Ottawa		4,967,832	228,068	5,195,900	2,162,936	2,287,152	745,812	41.6
East Midland....		2,427,604	168,908	2,596,512	786,562	1,545,518	264,432	30.3
North'n Districts.		922,991	104,662	1,027,653	103,029	828,966	95,658	10.0
The Province	1886..	20,861,552	897,243	21,758,795	10,938,471	8,676,686	2,143,638	50.3
	1885..	20,671,554	1,103,745	21,775,299	10,856,283	8,883,004	2,036,012	49.9
	1884..	20,567,632	1,144,684	21,712,316	10,736,086	8,914,719	2,061,511	49.4
	1883..	.....	.....	21,458,067	10,539,557	8,825,337	2,093,173	49.1

These areas are for the portions of the province only in which municipal government has been set up, and of course they fail to indicate the progress of the country in those unorganized districts or outposts of settlement where the backwoodsman is planting his home. In those districts, stretching from the Muskoka lakes and around Lake Nipissing to Lake of the Woods, there is possibly a larger measure of growth than anywhere else in the province; but it is only when municipal institutions are established that means are provided for the collection of yearly statistics. The total area of resident land in the Northern districts last year, according to the returns of assessors, was 922,991 acres; whereas the census enumeration of 1881 for the same territory shows that the total area of resident or occupied land in that year was 1,316,000 acres. The latter includes the unorganized settlements as well as the organized townships, whereas the former gives the statistics of organized townships only. But since the census of 1881 the Ontario Government has sold about 475,000 acres of Crown lands, nearly the whole of which is in the Northern districts; so that the total extent of occupied lands in those districts (including the free grant locations made since 1881, less locations cancelled) is probably 2,000,000 acres, or more than a million acres in excess of the municipal enumeration. It will be observed that in the older districts the area of assessed land has increased by 300,000 acres during the three years 1883-86; and that during the same period the area of cleared land has increased by 400,000 acres, or the equivalent of ten townships of average extent. The proportion of cleared land to the total occupied varies from 10 acres per 100 in the Northern districts to 73½ acres per 100 in the Lake Ontario counties, and the average over the whole province is 50⅓ acres per 100. During the three years

1883-86 it rose from 49.1 to 50.3 acres per 100, or an average of 1.2 acres per 100. Of the remainder, nearly 40 acres per 100 is wood land, and nearly 10 acres per 100 is swamp, marsh or waste land. The proportion of the latter has remained stationary, but the proportion of wood land has decreased from 41.1 acres per 100 in 1883 to 39.9 acres per 100 in 1886.

The acres under staple field crops are presented in the following table for each of the five years from 1882 to 1886, together with the averages for the period:

Field Crops.	1886.	1885.	1884.	1883.	1882.	1882-6.
Fall Wheat	886,402	875,136	864,740	1,097,210	1,188,520	982,402
Spring Wheat	577,465	799,463	721,647	586,410	586,817	654,360
Barley	735,778	597,873	700,472	757,156	848,617	727,979
Oats	1,621,901	1,543,745	1,481,828	1,418,309	1,387,487	1,490,654
Rye	67,779	78,293	103,416	188,111	185,276	124,575
Pease	703,936	646,081	570,928	542,771	560,770	604,897
Corn	156,494	167,831	174,560	214,237	206,755	183,976
Buckwheat	70,792	61,776	65,836	67,802	50,035	63,248
Beans	21,072	24,651	24,878	25,907	19,787	23,259
Potatoes	140,143	159,741	168,757	166,823	160,700	159,233
Mangel-wurzels	18,170	16,435	18,341	17,219	15,791	17,191
Carrots	9,267	9,024	10,987	11,270	9,955	10,101
Turnips	98,931	102,303	104,199	98,429	78,823	96,537
Hay and Clover	2,295,151	2,268,091	2,193,369	2,350,969	1,825,890	2,186,694
Totals	7,403,281	7,350,443	7,203,958	7,542,623	7,125,223	7,325,106

The total area differs but slightly in any year from the average of the period, but fluctuations are apparent in the case of three or four crops—the result, in each case, of causes clearly indicated by their history. The areas by groups of counties are shown as follow:

Districts.	Acres under crop.						Per cent. of cleared land under crop.		
	1886.	1885.	1884.	1883.	1882.	1882 6.	1886.	1885.	1882-6.
Lake Erie	920,626	919,395	899,503	918,837	851,782	902,028	71.0	71.5	71.9
Lake Huron	772,120	762,718	743,322	790,126	710,573	755,772	64.5	65.5	66.6
Georgian Bay	647,156	646,713	631,844	669,732	637,064	646,502	67.4	67.9	68.2
West Midland	1,426,069	1,447,747	1,396,151	1,491,763	1,414,673	1,435,281	65.1	66.6	67.2
Lake Ontario	1,597,507	1,577,546	1,577,521	1,640,591	1,556,106	1,589,854	71.3	70.7	72.0
St. L. & Ottawa	1,396,090	1,368,026	1,340,922	1,376,117	1,334,410	1,363,113	64.5	63.6	64.9
East Midland	562,249	545,180	534,780	568,463	556,886	553,512	71.5	68.9	71.5
Northern Dists.	81,464	83,118	79,915	86,994	63,729	79,044	79.1	80.1	84.3
The Province	7,403,281	7,350,443	7,203,958	7,542,623	7,125,223	7,325,106	67.7	67.7	68.8

Here, of course, the variations from year to year are less marked than in particular crops, and, with the exception of one year, a growing area under crop has been constant. For the average of the five years it appears that 68.8 per cent. of all the cleared land of the province has been kept under the fourteen crops enumerated above. Of the remainder the greater portion is kept in pasture, but the statistics of pasture land have been

collected only for the last three years. They are given in the following table by groups of counties for each year and for the average of the years:

Districts.	1886.	1885.	1884.	Average 1884-6.
	Acres.	Acres.	Acres.	Acres.
Lake Erie	357,906	348,323	309,696	338,642
Lake Huron	355,981	327,942	328,101	337,341
Georgian Bay	230,088	214,957	212,444	219,163
West Midland	607,906	576,195	570,833	584,978
Lake Ontario	465,587	453,066	438,011	452,221
St. Lawrence and Ottawa	791,014	765,263	724,344	760,207
East Midland	200,968	208,254	195,076	201,433
Northern Districts	16,871	17,199	16,481	16,850
The Province	3,026,321	2,911,199	2,794,986	2,910,835

The remaining portion of the cleared land—being a little over half a million acres, or 46½ acres per 1,000—is taken up with orchard and garden, minor crops, house and barnyards, etc. The relative proportions of the principal field crops are shown in the following table, where the number of acres under each crop per 1,000 acres of cleared land are given for county groups in 1886 and for the whole province in 1885 and 1886, together with the averages of the five years 1882-6:

Crops.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. L. & Ottawa.	East Midland.	Northern Districts.	The Province.		
									1886.	1885.	1882-6
Fall wheat	177.6	124.0	69.0	115.7	68.2	4.3	32.8	.9	81.0	80.6	92.3
Spring wheat	10.8	39.2	77.5	41.1	68.0	56.8	87.3	76.9	52.8	73.6	61.5
Barley	27.4	44.9	56.2	53.7	131.5	40.6	114.1	23.3	67.3	55.1	68.4
Oats	119.1	141.6	161.5	148.0	125.8	185.3	150.9	166.3	148.3	142.2	140.0
Rye	6.9	.5	1.3	1.2	9.8	8.4	17.5	6.5	6.2	7.2	11.7
Pease	55.3	72.2	84.1	64.5	71.6	46.1	71.3	72.7	64.4	59.5	56.8
Corn	69.6	6.0	1.2	10.1	8.7	5.6	5 1	2.0	14.3	15.5	17.3
Buckwheat	8.3	1.2	1.0	1.2	8.7	13.4	8.0	3.1	6.5	5.7	5.9
Beans	11.0	.6	.2	.3	.8	1.3	.5	.4	1.9	2.3	2.2
Hay and clover	210.2	193.5	193.6	186.2	190.8	263.1	203.8	389.6	209.8	208.9	205.3
Potatoes	11.0	9.7	13.2	10.6	12.3	17.2	14.2	24.5	12.8	14.7	14.9
Mangel-wurzels	.9	1.8	1.0	2.7	2.3	.8	1.3	.8	1.7	1.5	1.6
Carrots	.5	.7	1.1	.9	1.1	.7	.9	1.2	.8	.8	.9
Turnips	1.3	9.4	12.7	14.7	13.2	1.9	7.1	22.5	9.0	9.4	9.1
Totals 1886..	709.9	645.3	673.6	650.9	712.8	645.5	714.8	790.7	676.8	.....	.....
Totals 1885..	715.2	654.5	679.2	665.5	706.6	636.3	688.7	800.8	.....	677.0	.....
Totals 1882-6	719.0	665.7	682.4	671.7	720.5	649.2	714.8	842.8	.....	.....	687.9

Hay and clover, it will be noticed, are the leading crops in all the districts. Of the cereals the three chief ones in each group of counties are as follows in their order as named: Lake Erie—fall wheat, oats, corn; Lake Huron—oats, fall wheat, pease; Georgian Bay—oats, pease, spring wheat; West Midland—oats, fall wheat, pease; Lake Ontario—oats, barley, pease; St. Lawrence and Ottawa—oats, spring wheat, pease; East Midland—oats,

barley, spring wheat; Northern districts—oats, spring wheat, pease. In all, saving the Lake Erie group of counties, oats is the principal grain crop, being followed at long intervals by fall wheat, barley and pease. For the average of the five years, however, the acreage of fall and spring wheat exceeds the acreage of oats by 13.8 acres in each 1,000 acres of cleared land, the proportion being as 153.8 to 140.

FALL WHEAT.

The acreage of wheat sown in the fall of 1885 showed a considerable increase over that of the previous year. The late harvest made ploughing and seeding backward, and operations were further delayed in the southerly districts of the province by the excessive rains which succeeded in the early part of September. These being in turn followed by a somewhat extended period of dry weather, the ground in many places, especially on stubble lands, became baked and lumpy, and sowing was consequently difficult. In the case of fallowed land the conditions were more generally favorable. However, although seeding was delayed, the young plant made a prompt and vigorous start, and the fields at the end of November presented a very thrifty and promising appearance. The wire-worm and Hessian fly were present in many scattered localities, but they did not cause very serious injury. Unfortunately the winter in most of the fall wheat growing counties was anything but favorable to the crop. Excepting on late sown fields the young plants went into the winter with good growth and vitality; but from the middle of December, when a very mild period set in with much rain, the weather was of a varied and changeable character, and to almost every one of its characteristics—mildness, rain, intense cold, day thaws and night frosts, ice formation, etc.,—more or less of the injury done to the wheat is ascribed. The mild weather and heavy rains of January did some harm, but in many counties where these conditions were most marked they do not appear to have been very injurious. The drowning-out noticeable on low, wet lands was of later occurrence. In the colder counties the absence of the usual covering of snow in mid-winter must have had an unfavorable effect, as some of the frosts which followed the mild weather were of exceptional intensity. February appears to have been more destructive to the wheat, as in hollows and on low ground sheets of ice were formed, which remained long and smothered the young plants. Intense cold also seems to have been somewhat injurious this month. The absence of snow and the almost daily occurrence of night frosts and day thaws throughout March and the early part of April had a bad effect. There was also a considerable amount of rain which, collecting with the melted snow in the lower levels and hollows of the fields, formed ice sheets, the location of which was easily marked in April in thin and yellow patches of young wheat on most of the farms of the West Midland counties, and in all the counties eastward to Northumberland and Peterborough. In some of the more southerly counties, where ice sheets did not form to any extent, the water standing for days unable either to sink into the ground or run off, produced the "drowning-out," which caused great damage on low lying clay soils. East of Ontario county, excepting in Lanark, Carleton and Leeds, there was but little complaint of unfavorable weather. In a few localities in that part of the province low lands suffered from ice sheets and drowning, and on high lands from which the snow was blown off there were patches of winter-killed wheat: but generally from Durham eastward there was sufficient snow to afford protection, and the conditions which led to the formation of ice sheets in the hollows were not present in sufficient measure to cause serious injury except in a few townships between Ottawa and Brockville. Smothering by snow occurred in only a few instances, and these in northern townships where the snow had drifted along the fences. The snow storm of early April caused a good deal of damage in the Lake Erie and other southern counties. The snow fell to a depth exceptional even in winter; it melted rapidly, flooding the low lands, and was followed by a very hot sun. The result of these circumstances was what is termed "scalding;" a condition of impaired vitality that showed itself in the drooping and yellowing of fields which had come out of the winter in fair or even good condition. The snow in some localities is said to have so packed in the

outlets from the hollows that flooding became inevitable. Of the numerous causes affecting wheat unfavorably, no doubt the formation of ice sheets in the hollows was the greatest. These sheets formed quite generally over the province, from Peterborough and Durham counties in the east to Perth, Middlesex and Norfolk in the west, and from the eastern part of Lake Erie northward to the Georgian Bay. In the later part of spring the lack of rain in a few localities retarded the growth and diminished the thrifty appearance which much of the wheat had at the close of the winter, and over a limited area in both eastern and western Ontario excessive wet was complained of. With these comparatively unimportant exceptions, the province had a spring unusually favorable to the wheat fields. Fortunately, the favorable weather continued through the summer, and the portion of the crop that survived the winter was given a fair chance to grow and mature. The dry weather in the western part of the province shortened the straw, but did not lessen the yield so much as might have been expected. In the extreme east there was somewhat too much rain. Throughout the greater part of the province the harvest was unusually early, and the great bulk of the grain was secured in very fine condition, thus making up by good sample what it lacked in yield. The crop was short, but of exceptionally good quality. In only one portion of the province was the yield a very full one, namely, in the eastern Lake Ontario and East Midland counties. In that section the crop was a very satisfactory one in all respects. One report from Peterborough county gave an average of 40 bushels, and mentioned a particular yield of 47 bushels per acre. Several correspondents in the same section reported yields of over 30 bushels. Except in a few places in the River counties, where there was too much rain, the quality of the grain was far above the average, many correspondents describing the wheat as the best they had ever seen. Tests of weight seem also to have given very satisfactory results. One case—from Harwich, in the county of Kent—of 68 lbs. to the bushel was reported, and a number of returns mentioned weights in excess of the standard. Only a small percentage of the correspondents complained of damage by rust, midge or wireworm, and these chiefly in the western portion of the province. In some places chess and noxious weeds grew up in spots left bare by winter-killing. The following table shows the acreage and product of the crop, as compared with that of 1885 :

Districts.	1886.			1885.		
	Acres.	Bush.	Bush. per Acre.	Acres.	Bush.	Bush. per Acre.
Lake Erie	230,280	4,600,438	20.0	213,014	5,119,801	24.0
Lake Huron	148,405	3,262,962	22.0	133,205	3,351,758	25.2
Georgian Bay	66,244	1,193,729	18.0	77,385	1,824,335	23.6
West Midland	253,484	5,355,596	21.1	242,963	5,878,938	24.2
Lake Ontario	152,819	2,826,348	18.5	168,784	4,505,462	26.7
St. Lawrence and Ottawa	9,245	186,073	20.1	15,364	294,721	19.2
East Midland	25,830	644,477	25.0	24,097	496,628	20.6
Northern Districts	95	1,519	16.0	324	6,638	20.5
Totals	886,402	18,071,142	20.4	875,136	21,478,281	24.5

Lake Erie Counties.—In the counties bordering on Lake Erie the outlook for fall wheat in the spring was far from encouraging. Except in Welland, little if any more than half an average crop was expected. The mild weather in December was the cause of no little winter-killing, and severe, unseasonable weather in April had the effect of almost destroying the plants on sandy soils. Upon the advent of warmer weather, however, the prospects began to improve perceptibly, and although it was not

to be expected that after having a considerable proportion of the plants killed by successive thaws and heavy frosts in winter such a yield as that of 1885 could be harvested, the crop proved a much better one than the May reports promised. The straw was for the most part neither very long nor very heavy, and generally the crop stood rather thinly upon the ground; but, on the other hand, the ears were for the most part large and well filled with an exceptionally plump and thoroughly perfected berry. Indeed it would seem that even where the crop was poorest in point of quantity the sample was first-class in every respect. Thus it will be seen that a favorable summer and harvest did much to atone for a very unpromising winter and early spring. In the county of Essex much of the grain was winter-killed, especially on low-lying, undrained lands, but those plants which were left to survive the misfortunes of the winter developed wonderfully well, and the product was harvested in first-class condition. Of thirteen reports from this county six may be classed as favorable, three as medium and four as unfavorable. Insect pests were mentioned in only three reports as having done any harm, and in those cases the damage was comparatively slight. Late spring frosts were also somewhat destructive in some portions of Essex. In Kent the crop was also very much better than the spring indications promised. Out of twenty correspondents, nine reported very favorably, eight reports may be classed as medium or fairly satisfactory, and only three as positively unfavorable. While fourteen referred to the sample as excellent, only one reported an inferior quality of grain. Spring frosts and drouth constituted the most serious drawbacks to the success of wheat in Kent during the season, while only one correspondent reported anything serious in the way of winter-killing. Rust was mentioned in only two reports, and insect pests in three, but in these cases the damage done was not regarded as very serious. In Elgin the reports were also very encouraging as compared with the spring condition. Nine correspondents reported very favorably, while the remaining six reported a fair average. The damage done by winter-killing was not so serious as first anticipated, and a remarkably plump good sample appears to have more than made up for the thinness of plants on the ground. Four correspondents reported winter-killing, and only one alluded to rust as having done any serious damage. The unprofitable practice (too common in Canada) of cutting grain before it is quite ripe was alluded to by some correspondents in this county. In Norfolk the reports did not average quite so well. While the sample was good, the crop was for the most part rather light. Winter-killing, late frosts and wet weather were the destructive agents, and the eleven reports furnished from that county would indicate that in point of quantity the fall wheat product was considerably below the average. Seven reports may be classed as medium, three as very unfavorable, and only one encouraging. Twenty-two reports from Haldimand showed an average far from satisfactory. Four were favorable, nine may be classed as medium, and nine as essentially discouraging. Thirteen correspondents reported a good sample, and five a shrunken and discolored berry that was nothing like first-class. In eleven reports winter-killing was mentioned, and in the reports from five localities late frosts and rusts were mentioned as destructive agents. In pleasing contrast to all this came the reports from Welland, which were with two exceptions of the most encouraging character, and even these two may fairly be classed as medium. One report mentioned insect pests, one late frost, two rust and two wet weather as destructive agents; but in these cases the damage seems to have been very trifling. Altogether, it may be said that in Welland a fairly heavy crop of well matured wheat was harvested in prime condition. In Kent, Essex and Elgin the fall wheat harvest was begun at dates ranging from the 6th to the 20th of July, while in Norfolk, Haldimand and Welland it appears to have averaged three or four days later.

Lake Huron Counties.—When the May reports were sent in the Lake Huron counties promised a good yield, for though in the southern part of Lambton the crop had been much injured by winter rains, frost and insects, and retarded by dry weather in spring, the northern part of the county seemed but little short of an average, and the large counties of Huron and Bruce promised generally a good harvest. They had

apparently suffered less than usual in most sections from winter-killing or any of the agencies mentioned, and several correspondents reported the best crop for years. The August reports from the same counties indicated that in many localities winter-killing, or, more strictly speaking, injury by frosts in spring, prevailed to a larger extent than was apparent when the returns were made up on which the May report of the Bureau was based. At the same time, as not infrequently happens, an unusually favorable growing season succeeded the trying weather of early spring, and the recovery from these injuries was much better than was expected. The fall wheat "picked up wonderfully," as several correspondents expressed it, and taking these counties as a whole the tenor of the great bulk of the reports would justify the expectation of nearly, if not quite, a full average crop. The sample was almost invariably spoken of as exceptionally fine, the berry being large, plump and well colored, the heads well filled, while the straw—with the exceptions hereafter to be noticed—was bright and clean. This is the sum and substance of the majority of the reports. The fall wheat in Lambton suffered only in isolated localities from either insect pests or unfavorable atmospheric conditions. Occasionally low lying or late sown fields were reported as injured by rust in patches, and a correspondent in Brooke stated that "one kind called the Sifton seems to be blighted, supposed to be caused by too much dry hot weather." Another, writing from Warwick, said "the Egyptian variety has suffered considerably from weevil." A correspondent in Brooke reported the presence of the midge, but said it did no very serious injury, and another in Dawn mentioned that the weevil appeared in some varieties. In Huron county though a good deal of damage was reported from winter-killing, as well as from frost and cold rains in spring, especially in the more northerly townships, the percentage ploughed up was small, and in most cases the crop made an unexpectedly good recovery. The Hessian fly was mentioned by many correspondents, especially in the northern part of the county, but the area over which its ravages were such as materially to decrease the yield appears after all to have been inconsiderable. Several correspondents mentioned without naming "an insect that works at the first joint of the stalk," and in a few localities its operations were extensive enough to seriously impair the yield. Owing to moist weather in the ripening season rust made its appearance in some cases, but to a very limited extent, and there was no general injury to sample or yield from this cause. In Bruce fall wheat appears to have experienced an unusual degree of immunity from insect pests, the only exceptions being an occasional field attacked by the Hessian fly, or "an insect that works at the lower joint." The atmospheric conditions throughout the summer were also so exceptionally favorable that to a very large extent they overcame the effects of the adverse weather of winter and early spring. In all the Lake Huron counties harvesting began early and progressed rapidly. The weather was generally of the best, the labor supply abundant, and the crop was housed in splendid condition. A rapidly increasing number of self-binders is reported in all three counties, and their economical value on the farm is invariably spoken of in the highest terms.

Georgian Bay Counties.—The reports from the Georgian Bay counties indicated a very small yield of fall wheat of good quality. Wherever the grain survived the frost and rain of winter it prospered during the summer, the season being reported as unusually favorable. With few exceptions, the correspondents stated that the wheat ripened well, showing fine full heads and an excellent sample. A small amount of damage was caused in some localities by rust and rain, and in others by the weevil and Hessian fly; but the ravages of these enemies were scarcely worth noticing in presence of the disastrous effects of the adverse winter weather. In Simcoe county the damage by winter-killing was very large. One correspondent estimated that in his district nearly half of the wheat was ploughed up, that what was allowed to remain would yield about half a crop, and that this estimate would probably hold good for the greater part of the county. The statistics show, however, that the area was only reduced one-fourth, for out of 71,606 acres sown in the county, 18,400 acres were ploughed up. An Essa report said: "Fall wheat was very generally winter-killed in all this section. I never saw so much ploughed

up before, but what wheat did survive was very good." An Oro correspondent estimated the yield at twenty per cent. of the previous year's, and one in Tecumseth placed the average in his township at ten bushels per acre. The reports from Grey were not quite so unfavorable as those from Simcoe. Much less of the wheat was ploughed up in spring, and with few exceptions the surviving fields were spoken of as fair and the sample very good. The ravages of the joint-worm were complained of in a few instances, most frequently from the township of Normanby. A Sarawak correspondent said: "Fall wheat is half to two-thirds winter-killed, but what is left is first-class sample." From this the estimates varied up to that of a Sullivan farmer who said: "With the exception of a few fields partly winter-killed the fall wheat is a full crop, better than for several years past." In both counties cutting was well over by the end of July, having been generally commenced between the 25th and 28th. The crop was saved in good condition.

West Midland Counties.—The later reports concerning the condition of fall wheat in the West Midland counties differed considerably from those sent in in May. At that time the reports from Brant, Middlesex and Oxford were particularly unfavorable, while the prospects in Perth appeared to be exceptionally good. It afterwards appeared, however, that the promises of the Perth reports proved somewhat delusive, while decidedly favorable accounts came from other districts, and especially from Oxford. Altogether the crops turned out more satisfactorily in this group of counties than was expected. As in some other portions of Ontario, the straw was short and light, but the complete maturity of the ears and of the berry itself seems to have in a great measure made up for the lack of luxuriance which characterized the plants during the earlier stages of their growth. As every experienced wheat grower knows, it is not always the crop that has the rankest growth of straw that gives the best returns when threshed. Standing somewhat thinly upon the ground, the wheat crop of last year had the ripening influences of the summer sunshine in every ear, and the consequence was that nearly every plant left alive after a very unfavorable winter and early spring reached full fruition. The August reports from Brant did not indicate the harvesting of a crop any lighter than might have been anticipated from the May reports. Winter-killing, wet weather, late frosts, rust and insect pests were all mentioned, but except in the cases of the two first mentioned agencies it would seem that the damage was neither intense nor wide-spread. In Oxford, out of eleven reports seven were favorable, three medium and but one distinctly unfavorable. Except in one case the reports characterized the sample as extremely good. One correspondent made mention of insect pests, but was of opinion that the damage done was trifling. Late frosts and rusts were mentioned twice, and damage through wet weather in three reports. The winter-killing in this county was evidently not so serious nor so general as at first supposed. A destructive hail storm was referred to in one report. From Perth the reports were singularly varied. Out of seventeen reports eight were very favorable, seven medium (or perhaps a little below), and two were pronouncedly discouraging. A dozen correspondents made especial mention of the excellence of the sample, while but one reported any inferiority in this respect. One report mentioned the ravages of insects on a small scale, one referred to late frosts, two to rust, four to winter-killing (which was evidently very serious,) and two to damage done by cold and wet weather. The reports from Dufferin were few and unsatisfactory; they indicated, however, that the crop was light and the sample good. Late frost, winter-killing and wet weather were all referred to as having come in the way of the wheat growers of that county. Fourteen reports from Waterloo indicated an extremely good average there. Five of these reports were thoroughly favorable, three medium and but two positively unfavorable. Thirteen reports spoke in the highest terms of the sample, the berry being large, plump and fully matured. Six reports referred to fields that suffered from winter-killing. One correspondent mentioned weevil and another midge, two spoke of rust, one of wet weather and one of drouth. In the county of Wellington the reports indicated a condition varied according to locality, and these variations were in some instances extremely wide. Of nineteen reports nine were favorable, five medium or non-committal

and five anything but assuring. Twelve correspondents agreed in reporting an excellent sample, while one pronounced the crop in his locality somewhat uneven in this respect. In one report the weevil was mentioned, and in two late frosts were charged with having damaged the crop. Rust, wet weather and winter-killing were referred to, but not generally. The reports from Middlesex were thirty-one in number, and, as in some of the other counties in this group, they indicated wide differences in the condition of the crop. Sixteen correspondents reported a good crop, nine a medium one and four a yield very much below the average. Nearly all referred to the sample as good; one mention only was made of insects, three of late frosts, seven of rust, five of drouth, four of winter-killing and two of the unfavorable influence of unseasonably cold weather. Altogether the harvest realized much better than was hoped for three months before, both in product and in quality. The period of commencing wheat cutting in this group of counties ranged all the way from July 10th to the 30th, the crop in Dufferin appearing to be particularly backward in this respect. In Middlesex, Waterloo, Oxford and Perth the average would probably fall on the 19th or 20th of July.

Lake Ontario Counties.—The crop in the Lake Ontario counties was much below an average, owing almost entirely to the bad winter. The August reports were nearly unanimous in describing the sample as unusually good and the fields free from both rust and insect pests; but over the whole group the average yield was very small. Only in the three eastern counties, Durham, Northumberland and Prince Edward, was the wheat anything like a fair crop, and the reports from those counties were very favorable. In Prince Edward and Northumberland there appears to have been none of the wheat winter-killed, and only two correspondents mentioned damage by rust. In Durham the winter weather was a little more destructive. The correspondents in all three counties spoke in highest terms of the condition of the crop when harvested. In one or two townships July rain storms lodged the wheat, but did not cause much damage. "The best crop for years," "exceptionally good in yield and quality"—such were the reports from portions of Northumberland. Unfortunately for the farmers in those counties, however, they are wont to place little dependence on fall wheat, and their acreage was therefore small compared with that of the more westerly counties, where the crop was a bad failure. York and Ontario were the worst sufferers in this group, and along with Simcoe the worst in the Province. In York, out of a total of 52,575 acres sown, 15,847 acres were ploughed up in spring, or nearly one-third of the whole area. In Ontario 5,680 acres were ploughed up out of a total of 13,805, or over one-half. In the townships of Pickering, Scarborough and Uxbridge about seventy-five per cent. was ploughed up or re-sown with spring crops, and the surviving fields were estimated by some of the correspondents to yield only half an average crop. Slight damage to late grain by rust was reported from portions of Georgina, Etobicoke, King and Scarborough, in York; but apart from these there seems to have been a total absence of blight and pest, and the sample was generally very good. The remaining counties, from Peel to Lincoln, suffered less severely, but still the damage was great. All reported a heavy percentage killed by the winter frosts or the spring rains. The latter caused most of the destruction in Lincoln. In Peel about one-tenth and in Halton nearly one-eighth of the wheat was ploughed up; in the other two counties the percentage was very much smaller. Peel townships reported from one-third to three-fourths of an average crop, and Halton from one-third to one-half on the surviving fields. Three townships in Wentworth reported two-thirds of an average and two reported one-half. Lincoln gave about the same return as Wentworth. Not more than six correspondents in all four counties mentioned rust or insects, and in each instance the damage was scarcely noticeable. The sample was almost invariably good.

St. Lawrence and Ottawa Counties.—The area of land sown in fall wheat in the St. Lawrence and Ottawa counties is generally very small, and the acreage sown in 1885 was less than usual, owing apparently to unfavorable weather at seeding time.

Winter-killing or injury by severe frosts in spring was very generally complained of, especially in the more easterly counties, but the damage from these causes was proportionately less than in some counties farther west. The growing season was very favorable to the development of the crop, and up to nearly harvest time the promise was good. There was too great a rainfall, however, for harvest weather, and the grain was not saved in as good condition as in the western counties.

East Midland Counties.—In the East Midland counties the fall wheat crop was much the best in yield and quality that has been reaped for several years. The returns from Hastings, Victoria and Peterboro' were practically unanimous as to the healthy development of the grain, its freedom from insect enemies and rust, the excellence of the sample, and the fine condition in which most of it was housed. In Haliburton the reports were scarcely less favorable, though, of course, the acreage sown was not very large. Regret was frequently expressed by correspondents that a larger area was not sown in fall wheat. An occasional report mentioned that the crop was slightly winter-killed, but the effects were only visible in shortened straw, or thinness in patches, and they were more than balanced by the heads being unusually large and well filled, and the grain plump and bright. On some exposed patches from which the snow was blown during the winter the crop was not up to the general high average, but like the other adverse influences in the East Midland counties these cases were few and far between. As for rust or insects, there was absolutely no mention of them in the reports. Harvesting began early, and as the weather was favorable the great bulk of the crop was safely housed. Labor was abundant and cheap, and the services of the self-binder were availed of more largely than in any previous year.

The Northern Districts.—The quantity of fall wheat grown in the northern districts was small, but where tried the crop was fairly successful. A few reports, spread over most of the districts, mention winter-killing. The crop was generally well saved and gave a fair yield.

FROM THE MAY REPORT (MAY 15).

J. H. Morgan, Anderdon, Essex: Wheat is only a middling crop; on clay it suffered much by frosts; the injury may be rated at 33⅓ per cent., but no wheat has been ploughed up.

Edward Nash, Mersea, Essex: Wheat is poor; on low lands it was drowned out, and on sandy knolls the flyhas killed it; when the snow melted the water could not get off, and so drowned it. Hesian fly has done harm in some places. Some wheat has been ploughed up.

Geo. Little, Sandwich East, Essex: Fall wheat in general looks well; on light, mucky ground there is some njury; I think the worms worked on it. No wheat has been ploughed up.

T. F. Kane, Maidstone, Essex: Wheat is fairly good; it is winter-killed more or less on very light loamy soil, but on heavy clay or gravel it is very good; I know of only one field, and that is over the town-line in Sandwich East, which has been destroyed by insects. Have heard of no ploughing up.

A. W. Cohoe, Rochester, Essex: Wheat is forward but thin; appearances are fair on sand, but the crop is light on clay. A third of the crop has been injured by weather, and a small area has been ploughed up.

R. H. Waddell, Tilbury East, Kent: Fall wheat on the whole looks well, the exception being in the case of that sown upon sandy land, which has suffered a little from frost. On clay soil it has stood the winter remarkably well.

Matthew Martin, Tilbury East, Kent: Wheat in some localities will be below an average. It is best on clay soils and poorest on sandy. The last heavy fall of snow, about the 6th April, injured it badly, and the very hot weather immediately after seemed to scald it.

W. McKenzie Ross, Harwich, Kent: Pretty good, but wheat has been better on light soil than on clay; more or less destroyed where water lodged, and some fields have been ploughed up.

Robert Cumming, Harwich, Kent: In this neighborhood wheat is generally poor; not likely to be half a crop. Snow storm of 6th April is thought to have done some damage.

John Tissiman, Raleigh, Kent: Wheat prospects are middling; much better on clay lands than on light. The crop was somewhat injured by frosts while uncovered by snow, but I have not heard of any wheat having been ploughed up.

George Green, Chatham, Kent: Very thin; about half a crop. On heavy clay it is much better than on sand or loam; none looked well when snow went off. The cut worm seems to be doing much harm. No land ploughed up in this neighborhood. Continuous cropping with wheat is the chief cause of failure here; it is sown till a bad failure occurs.

Wm. Clarke, Aldborough, Elgin: Will not average over half a crop in my neighborhood; March frosts and over-cropping are the principal causes of failure; no wheat ploughed up.

Jabel Robinson, Southwold, Elgin: Fall wheat looks well, and is very far advanced for the season. It has done best on heavy clay and in sheltered places. There has been considerable killed in spots by water standing and freezing. No land ploughed up.

George A. Marlatt, Bayham, Elgin: The wheat crop is fair. On low, undrained soils the plant is badly perished, but on high, warm, well fallowed soils it is extra good. Very little wheat has been ploughed up.

Albert Gilbert, Woodhouse, Norfolk: Only about sixty per cent. of an average crop, but better on heavy loam or clayey soil. The crop was badly killed on light soils. A considerable quantity was killed by ice in the winter, and some was smothered by the heavy fall of snow in the early part of April. No wheat has been ploughed up.

A. N. Simmons, Middleton, Norfolk: Wheat is not as good as last season. On high land it promises well, but on low lands the wet condition of soil, owing to frequent rains, is affecting it adversely. It was winter-killed in exposed spots, owing to hard freezing weather and lack of snow during January and February. No wheat land has been broken up.

Herbert Kitchen, Townsend, Norfolk: Good, and remarkably sound. Promises above an average crop; but is better on well drained upland, such as sand and loamy soils, than on level clay requiring ridging. It was injured somewhat by water in furrows and low spots freezing in early spring; also by spindling up too rapidly during a warm spell without rain that followed the frost coming out of the ground. No ploughing up.

L. N. Collver, Townsend, Norfolk: As a whole, not above half a crop. The ice with which the bare ground was covered for some time seemed to smother out the wheat and clover, and the vast amount of water with which it was more or less covered after the big snow storm in April drowned out considerable more. No ploughing up.

William Hedges, Walpole, Haldimand: Crop somewhat damaged by winter; about a quarter killed; better on light land; very little ploughing up.

J. R. Smith, North Cayuga, Haldimand: Very poor; not more than one-third crop; on low lands it is best. Injury was done by ice and frosts. About one-twentieth of fall wheat area has been re-sown with spring crops.

Joel Misener, Moulton, Haldimand: Not good; badly winter-killed; on sandy soils or clay loam it cannot be one-third of a crop. Damage is wholly by ice and frosts. Some ploughing up, but not much, as farmers sow on timothy and clover.

Arthur Simenton, Seneca, Haldimand: Crop very bad, but heavy clay and dry soils are the best. Frost the first three days of March cooked the wheat; quite a lot is being ploughed up, and eighty per cent. in this locality should be.

Wm. Mussen, Oneida, Haldimand: Fair appearance on rolling land but very poor on low land; injury done by night frosts and day thaws in early winter; much ploughed up or to be ploughed up for barley.

Chas. Henderson, Wainfleet, Welland: Wheat crop good, especially on clay soils; late sown wheat seems to have suffered; no ploughing up.

Jas. McClive, Bertie, Welland: Wheat looks well; better than usual, and is good on all sois; no injury whatever has been done by winter or insects. I planted wheat as late as 10th October in 1885 on land well top-dressed—about sixteen or eighteen loads well rotted barn-yard manure per acre, and it now looks A1.

S. H. Van Every, Pelham, Welland: Wheat promises a fair crop; it is good on sandy upland, but on clay and clay loam poor; snow and ice did no injury, but the Hessian fly in some places has done considerable harm; no ploughing up.

John Graus, Sombra, Lambton: On manured land wheat has made a fine growth and looks well, but a good deal has been sown on exhausted soil and cannot amount to much. Some has been sown on second sod and the wire-worm has done much damage, still there is none likely to be ploughed up.

Simon Burns, Dawn, Lambton: The general condition very discouraging; very much hurt on the high as well as on the low lands. The failure apparently is due to absence of snow in February and March, and the alternate freezing and thawing in those months. A considerable area has been ploughed up, and more may as well be. There was no rain since the last fall of snow to do any good till May 9th. One-quarter of the crop in this vicinity is injured. Early sown wheat has escaped with slight injury. I believe the bulk of the fall wheat should be sown on or before September 10th.

W. G. Willoughby, Brooke, Lambton: Very good; not much difference on soils, but crop rather better on clay than on loam; lacked rain until lately. In low undrained places the crop is damaged somewhat by frost; no ploughing up.

John L. Wilson, Enniskillen, Lambton: On the average not more than half a crop, but some very fine fields. A large area looks poor, the wire-worm having been at work. Winter rather hard on wheat which had not a good start in the fall. A considerable area has been ploughed up.

Henry Ingram, Enniskillen, Lambton: Very good generally, but early sown is not bad. The dry windy weather this spring has done harm, and a good deal has been injured by the wire-worm. A large area has been ploughed up.

J. B. Hobbs, Warwick, Lambton: On good soil looks well; on wet or poor land somewhat damaged in March. None ploughed up; the growing showery weather has helped it. The yield will probably be above the average.

B. B. Smart, Sarnia, Lambton: Poor; a good deal ploughed up. After the heavy snow storm of April 6th a very bright hot sun on the 7th and following days seemed to do more harm by scalding than any other cause.

D. S. Robertson, Plympton, Lambton: Fully seventy-five per cent. of wheat may be said to have been winter-killed. A good deal will be ploughed up, and a great deal more will be left that will not pay for the work.

John Dallas, Bosanquet, Lambton: Generally below the average; some fields look very well where it was put in early on well drained land, otherwise it is badly winter-killed; on sandy or light soil it is very poor, one-third injured by winter frost, there being but very little snow to protect it. Crop has made good progress lately.

Hector Reid, Stanley, Huron: On the whole good; very good on properly drained land, but on wet land thin and spindly. Within the last three weeks rain has injured wheat on undrained land.

G. W. Holman, Usborne, Huron: Good average crop; better on high rolling land than on flat or low land; heavy clay loam best. In several places it was killed in spots, mostly on low flat land; I think it was tilled too late and did not get good root; early wheat far better than late. In some cases I think the cut worm has done damage.

Walter Hick, Goderich, Huron: Generally a fair crop. Wheat put in early on land in good condition is magnificent, but the seed sown late or in soil not drained naturally or otherwise looks rather patchy.

George Hood, Morris, Huron: The yield promises to be from fifteen to twenty bushels per acre. I can't positively assign a reason for fall wheat going back as it visibly has, but think that the fine, dry, hot weather that followed the slight frosts we had tended to kill the plants whose roots were somewhat heaved.

G. Fortune, Turnberry, Huron: Generally good; better than for several years. It is very poor where the land is low and wet. It has been injured in spots where the snow lay deep; also a little by ice where it was frozen close to the ground in February. Probably two or three per cent. will be ploughed up.

John Anderson, East Wawanosh, Huron: Not very good, about one-half killed. On high dry ground, where sown early, very good. The Hessian fly injured a few fields last fall.

Edwin Gaunt, West Wawanosh, Huron: Fall wheat looks well generally. A small percentage was injured by frosts in April, especially on wet and undrained lands, and the succeeding heavy rains have not favored its prospects; but on light lands with open subsoil, or where lands are well underdrained, fall wheat looks grand.

Peter Corrigan, Kinloss, Bruce: Very fair prospects of an average crop. There has been rather too much rain for the crop.

Thomas Wilson, Huron, Bruce: The general condition is good; much better than for years past. On heavy clay land the crop is the best, and has suffered the least from winter-killing. Some injury has been done by rain on flat undrained land, but very little by frost.

J. B. Ritchie, Greenock, Bruce: Fall wheat is good, both early and late sowing, but best on rolling and open soils: clay and low lands not so good. Very little injury from snow: low spots were killed out by ice; the formation of ice is what mostly kills the winter wheat in this locality.

Wm. McIntosh, Arran, Bruce: Fall wheat as a whole appears to be above the average, but in almost every field, whatever the soil, it suffers more in small patches than in a general thinning out. No ploughing up.

John Douglas, Arran, Bruce: Crop variable; very good on rolling clay in good heart, but on low land very poor. Winter did little harm, but though the weather has apparently been favorable this spring, wheat has not done as well as usual.

M. J. Norris, Eastnor, Bruce: Fall wheat in some places has been considerably damaged, but where it has been sheltered it is very fair.

George Clarke, Collingwood and Euphrasia, Grey: Generally poor, with occasional good fields; heavy clay best. Wheat looked well when the snow went away, but it has died away since for some reason which I cannot explain. It may have been ice in winter that weakened the plant, and that the cold north east winds, of which we have had much, proved too trying for plants weakened by ice in winter. I think there will be a large percentage ploughed up.

Geo. B. Bristow, Osprey, Grey: Not very promising at present, especially on low and wet soils, but there will be very little ploughed up. Ice did most of the injury.

A. Stephen, Sullivan, Grey: The general condition of fall wheat in this township is better than for years past, both on clay and light soils. No ploughing up.

John Black, Bentinck, Grey: Fall wheat in this township is below the average. It is looking pretty well on light soil. When the snow disappeared it looked well but suffered badly afterwards by frost and wet. No doubt a considerable quantity will be ploughed up.

George Buskin, Artemesia, Grey: Half a crop; ice formed in parts of fields toward spring as solid as plank and the wheat was killed.

Thomas Kells, Artemesia, Grey: On high land well drained and land that was summer fallowed out of sod the crop is good. About a quarter of the crop was injured by snow and ice, and much is ploughed up or will be.

Henry Byers, Normanby, Grey: Rather poor, but no ploughing up. Wheat in this neighborhood is very patchy and looks very poor in a great many fields at present. It appears to be getting worse all the time.

James Shearer, Egremont, Grey: There is here and there a moderately good field, but the general appearance is very patchy. Round the fences where the snow lay deep and on sheltered spots it is all good, and also on high spots where it drifted bare. There was one day's heavy rain in February and another in March, and every depression was filled with water. It then froze hard at night in all these depressions. The wheat is smothered out. No wheat has been ploughed up.

Duncan McKenzie, Proton, Grey: Good; never saw it look better. All the fall wheat here is on clay loam.

W. W. Colwell, Essa, Simcoe: The worst for many years; killed out to a great extent on all soils. Just a little is left along the fences and in sheltered places. I never saw so general a ploughing up.

James Robertson, Flos, Simcoe: Fall wheat a total failure on all kinds of soil. Ninety per cent. has been ploughed up.

R. C. Hipwell, Medonte, Simcoe: Almost a total failure. About seven-eighths will be ploughed up. It came from under the snow all right, but the frost and cold winds completely killed it, except where sheltered on the west and north by bush.

Thomas S. McLeod, Oro, Simcoe: Very bad; killed out badly on all soils. It came out well when the snow went off, but has suffered severely since. More than two-thirds has been ploughed up, and what is left will be very poor.

Arch. Thomson, Orillia and Matchedash, Simcoe: Fall wheat in this locality on dry sharp soil looks well, but on clay soils is poor and partly killed out with the ice and frosts in the spring. There are some fields ploughed up but to no great extent.

Charles Cross, Innisfil, Simcoe: The rain is damaging the wheat at present, as what is left is scalding. Fully fifty per cent. has been ploughed up, and what is left is not more than half a crop, excepting in a few fields that were protected by woods, and there the wheat crop is good.

George Cowan, Innisfil, Simcoe: Poorest crop in thirty years. In January the snow went off the wheat; very hard frost followed and no snow fell for some time. Then the wheat was well covered up till March; came out well browned in the leaf but healthy at the roots. Owing to mild weather with heavy rains the ground became very wet; hard frost set in, with hot sun in the day time toward the end of March, and killed the wheat out. A good many ploughed up from one to forty acres on some farms in this part. Every farm has some wheat ploughed up, and there is not one-third to reap that was sown.

Thomas McCabe, Adjala, Simcoe: Not half a crop. On light land, not too rolling, wheat is all that could be desired, but on high rolling land where exposed it is badly winter-killed, and on heavy clay land, except where sheltered or well drained, it is very poor. Wheat was injured to some little extent. In some localities it is as yellow as if ripe.

T. Beckton, Ekfrid, Middlesex: Fall wheat will be an average crop if nothing happens to injure it. Wire-worm has destroyed an eighth part.

James Alexander, Ekfrid, Middlesex: Generally looking well, though somewhat patchy. Late sown wheat has a poor appearance. The half killed patches in my opinion were caused by the dry scorching weather we had in March, but some think that the heavy snow in April and the dry hot weather that followed were the causes. No ploughing up.

Wm. Wright, McGillivray, Middlesex: The hot spell in April did more harm than any of the winter conditions.

John Dixon, West Nissouri, Middlesex: Very poor on all soils; injured greatly by frost and rain and an insect. Nearly one-third has been ploughed up.

Jas. Fisher, London, Middlesex: Some fine crops of wheat and some very bad; on an average it is a fine looking crop. The last snow storm spotted some very fine fields. None being ploughed up.

S. P. Zavitz, Lobo, Middlesex: Some excellent fields, but many poor ones. The injury seems to have been done by the rains and hot weather this spring, as it come out well from the winter. None ploughed up.

Wm. W. Revington, Biddulph, Middlesex: The fall wheat came out from under the snow about the same as it went in last November. In this locality it is all that can be desired so far; to the north of here I have seen several fields badly injured by wire-worm, but otherwise good.

Alex. McFarlane, Norwich South, Oxford: Not very good; on clay it is killed out worse than on sand. The heavy snow of April 6th did injury. A little wheat has been ploughed up.

M. & W. Schell, East Oxford, Oxford: Hardly an average crop; quite patchy, and in many places the plant is small and weakly. Best on light or well drained soils, but has been injured by frosts in spring on clay or wet land. Ice was very injurious during February and first of March, especially on low lying fields. Very little has been ploughed up.

Robert Leake, East Oxford, Oxford: All the harm was done by ice in midwinter. Hilly fields are much better than flat ones; soil has not made much difference.

Jos. Sifton, North Oxford, Oxford: Except in rare cases it looks very poor; much was winter-killed, but every field in this vicinity is badly killed in spots by the ice. Some has been ploughed up, but not much, people thinking that half a crop of wheat would pay better than anything else.

Donald H. McKay, Nissouri East, Oxford: The crop is very poor. Early sown wheat on fallows will not average over half a crop. Fall rains did harm, and the Hessian fly is adding to the injury. Much wheat has been ploughed up.

Wm. Brown, Blenheim, Oxford: Fall wheat looks very promising on land naturally dry, but on low land it is very poor. Probably a twentieth part of the crop has been injured by weather. Very little has been ploughed up.

David Beamer, Burford, Brant: Fall wheat is generally poor. Ice and cold water lying on the surface of the land have caused the damage.

James H. Smith, Oakland, Brant: The crop is bad; nearly half of it has been killed, and in some places more than half. No wheat has been ploughed up in this township.

William Douglas, Onondaga, Brant: Some well drained fields free from black soil never looked better, but two-thirds of the crop is only "very middling."

James Spence, Blanshard, Perth: Not very good generally, except where sown early. Snow banks and melting snow and rain, freezing in low spots have done most of the injury.

Thomas Steele, Downie, Perth: Very good; above an average. It has been injured a little by rain on low land, as the spring has been rather wet.

D. McLean, Ellice, Perth: When the snow went off the wheat had a fine appearance, but heat and rains in April changed its condition, and on heavy clay soils it became brown, spotted and decaying from day to day until many fields have a sad appearance.

George Leversage, Fullarton, Perth: Generally good in this township, but it has suffered somewhat from rain and the hot sun. An average crop is looked for.

W. B. Freeborn, Mornington, Perth: Generally in fair condition. The crop has suffered on low ground and on all clay soil which has not been underdrained by heavy rains, it having rained almost every day since April 24th, and the weather is still unsettled.

Thomas J. Knox, Elma, Perth: Early in April the wheat was good, but of late the rains have done a good deal of damage on low lands. Work is very backward.

Thomas Maguire, Wallace, Perth: Wheat not good generally—patchy. The crop has been going back ever since the hot weather of 15th to 23rd of April. I look for a crop of 12 to 15 bushels per acre.

Thomas McCrae, Guelph, Wellington: Fall wheat will be little over half a crop, from exposure during the winter, and especially on low grounds from too much water in spring. Portions have been ploughed up on low land, and possibly about one-third will be on wet land when it gets sufficiently dry for the work to be done.

Alexander Kerr, Pilkington, Wellington: Generally fair crop; some fields very good, but low parts are killed out by ice. More than the usual area of fall wheat has been sown.

John Strang, West Garafraxa, Wellington: Wheat looked well when the snow went away, but a great deal of rain, with warm weather, has scalded it; not much will be ploughed up, but the crop will be thin.

Richard Blain, North Dumfries, Waterloo: Prospects are for a full average crop, except in low wet land or where water lay in March. No ploughing up.

John Snyder, Wilmot, Waterloo: Fall wheat is generally fair, and well advanced. Ice has done most damage; an occasional field has suffered through worms.

George Risk, Wilmot, Waterloo: Wheat very patchy on all soils, owing probably to ice. I know of only thirteen acres having been ploughed up.

Levi Witmer, Waterloo, Waterloo: Very promising where not damaged in the winter; all soils suffered alike. The damage, which amounts to one-fourth the crop, was done by ice. Some fields have been ploughed up and re-sown.

George Bailey, Melancthon, Dufferin: A good crop on dry land, but on low lands drowned out. Very little has been ploughed up.

William Dynes, Mono, Dufferin: Fall wheat very poor; about one-third will be ploughed up. There will not be more than one-half crop. The wet spring has done much damage.

James Stull, Grantham, Lincoln: Fall wheat not winter-killed, looks remarkably well on the clay. Much wheat was injured by frost. In places the early sown fall wheat on clay or loam was injured by the wire or cut worm early in the fall.

Adam Spears, Caistor, Lincoln: Ten per cent. will average a full crop where the land is sheltered; fifty per cent. half a crop, and forty per cent. one-fourth of a crop. Ice and alternate freezing and thawing the chief causes of failure. No ploughing up, but some re-sowing of spring wheat.

Isaac A. Merritt, South Grimsby, Lincoln: The general condition is not very good—most fields containing many bare spots. Ice and hard frost on bare ground caused the greatest part of the damage.

D. B. Rittenhouse, Louth, Lincoln: A very good crop; better on heavy than on sandy soil; injured on the latter by April rain. No ploughing up.

E. D. Smith, Saltfleet, Wentworth: Rather poor; about two-thirds a proper stand. The injury is from winter-killing at the root or freezing to death, hence it is worse on light land. There has also been too much wet this spring where land is not underdrained. None ploughed up.

W. Ptolemy, Binbrook, Wentworth: Where sheltered by woods wheat is in fine condition. From one-third to one-half of late sown wheat is gone, on high land from frost, on low ground by the floods in spring.

William McDonald, Esquesing, Halton: Fall wheat not over three-fourths of the crop it was last year. Too much rain for low or level land. Will be some ploughing up.

Wm. McKay, Toronto, Peel: Fall wheat a failure; a few fields are fair. The injury was caused by the severe cold when the ground was bare; the wet is doing some damage now. About half the wheat has been ploughed up; more would but the land is too wet.

John Jewitt, Chinguacousy, Peel: Very poor crop. About one-half should be ploughed up around here; but a half crop of fall wheat is generally better than a spring crop.

Thomas Swinarton, Albion, Peel: I don't think it can average more than two-thirds of a crop under the most favorable circumstances. Ice did harm. About five per cent. has been ploughed up.

Arch. McKinnon, Caledon, Peel: Fall wheat never escaped winter frost better. All who sowed fall wheat anticipate a heavy crop.

J. D. Evans, Etobicoke, York: Not one good field of fall wheat in this township. Three-fourths of the wheat is ploughed up, and what is left is miserable. I have never seen fall wheat so universally injured.

John A. Patterson, Scarboro', York: Very bad; nearly all killed by ice and frost. Ploughed up in this locality.

Simpson Rennie, Markham, York: Fall wheat nearly all winter-killed. About five-sixths of the land re-sown with spring grain.

Wm. H. Proctor, King, York: A poor crop. Nearly one-fourth has been ploughed up, and there will be more if the weather is not warmer and drier. There is a streak of land along the north side of King which seems to be favored. Travellers say it looks the best they have seen.

R. M. VanNorman, North Gwillimbury, York: There will not be more than one-third of a crop throughout the township.

George Evans, Jr., Georgina, York: Very bad on level clay lands, almost completely killed; on sandy soil, especially where lying to the south or in sheltered places, it is fair. Bare ground, with severe frost, caused most of the injury. Two-thirds ploughed up or re-sown.

Joseph Monkhouse, Pickering, Ontario: Nearly a total failure. Four-fifths ploughed up and re-sown with barley. Everywhere winter-killed, except on a small tract of newly cleared land.

Charles Calder, Whitby, Ontario: At least one-third of the wheat ploughed up, and about one-half of what is left will not be half a crop.

James McCullough, Jr., Uxbridge, Ontario: Nearly all killed, and ploughed it up for barley. The soil is mostly of a light loam, and want of shelter, the forests of early years being cut down, seems to be the cause of failure.

John Christie, Reach, Ontario: A good crop; very little injury from winter conditions; best on loamy soils, well sheltered from north-west winds; none ploughed up.

James Leask, Scott, Ontario: Fall wheat does not look well, being killed out in spots by ice on flat land and exposure to cold on high land. I have not seen a whole field ploughed up, but almost every field is sown in patches.

Lafayette Weller, Scott, Ontario: A poor crop; considerable spring wheat has been drilled in without ploughing on the fall wheat.

E. Lanigan, Mara, Ontario: A bad crop on low land; where the snow has lain the longest it is the best; frost and rain in early spring did damage. A great part of the fall wheat land has been ploughed up for spring crop.

John Foott, Hope, Durham: A good crop on all soils; it has not sustained injury from any cause.

James Brock, Cavan, Durham: Some patches have been ploughed up, but on the whole fall wheat is a good crop.

Platt Hinman, Haldimand, Northumberland: Fall wheat has never been better in forty years.

Wm. Macklin, Haldimand, Northumberland: The winter and spring having been favorable for fall wheat, it could not look better than it does.

E. A. Mallory, M.D., Percy, Northumberland: Very good and well forward. Not at all injured except on very low land, where the water covered the crop for a considerable time; but in this township fall wheat is not usually sown on very low land.

George N. Rose, North Marysburg, Prince Edward: Fall wheat is looking well. In some places the leaves are turning yellow, I think through some insect, but I do not think the damage will amount to anything.

J. C. Conger, Hallowell, Prince Edward: Fall wheat is generally good, having been well covered through the winter.

A. J. Brooks, Sophiasburg, Prince Edward: A good crop; on high land some winter-killed, but on low land it is very good.

George Lott, Richmond, Lennox: As a general thing fall wheat on all soils has wintered in fine condition, suffering very little.

Leonard Wager, Sheffield, Lennox and Addington: Fall wheat is extra good; some low places injured by wet.

Robert Cooke, Bedford, Frontenac: Fall wheat looks well; best on low level land.

A. Knight, Kingston, Frontenac: Fall wheat is in a fair condition. It appears best on clay or sandy soil.

Joshua Knight, Storrington, Frontenac: General condition good, the best for a number of years, and is equally good on all soils.

John C. Stafford, rear of Leeds and Lansdowne, Leeds and Grenville: Where sowed early it looks well. It is good on sandy and loamy soils when sowed early, but on clay ground somewhat injured by frost or ice, and is about half an average crop.

Alexander Buchanan, South Gower, Leeds and Grenville. Very little fall wheat sown round here, and what little there is was injured by ice.

Alex. Farlinger, Williamsburg, Dundas: Fall wheat has done well on clay and gravel soils, well drained.

T. M. Robertson, Nepean, Carleton: Fall wheat is in fairly good condition, but mostly injured on some soils by winter-killing and ice where unsheltered from winds.

Wm. Doyle, Osgoode, Carleton: Not much fall wheat is sown here, what was sown is greatly winter-killed by ice and frost.

Benj. McKeracher, Bathurst, Lanark: A good deal of the fall wheat is killed on new ground by the ice, some has been ploughed up.

Peter D. Campbell, Drummond, Lanark: Will be half a crop; I have seen some pieces that are sheltered from the north winds that look as well as I ever saw; but where this is not the case it was killed outright.

Robert Lawson, jr., Lanark, Lanark: Not very good, will not average half a crop; half-killed by frost and ice. Very little will be ploughed up, as half a crop of fall wheat is considered as good as a full crop of spring wheat.

Sidney Barclay, Ops, Victoria: Seventy per cent. of an average crop; was damaged by ice. About ten per cent. has been ploughed up.

John Campbell, Jr., Mariposa, Victoria: A fair crop; about twenty-five per cent. injured by frosts and ice. Very little has been ploughed up.

Amos Howkins, Eldon, Victoria: On the whole it never looked better, although not much sown. It can never be grown to advantage here till the land is underdrained.

Thomas Smithson, Fenelon, Victoria: Very good on dry or well drained lands, except on the tops of hills or where exposed to northwest winds. On wet or cold lands it is poor as usual. Much damage done both by exposure and by deep snow. About twenty-five per cent. will be ploughed up.

F. Birdsall, Asphodel, Peterboro': Fall wheat is a very good crop.

M. McIntyre, Monaghan North, Peterboro': Fall wheat looks very well.

John Lang, Otonabee, Peterboro': A good crop; not one acre in twenty will be ploughed up.

Hugh Caldwell, Chandos, Peterboro': In first class condition; never saw it look better, but there is only 147 acres in fall wheat in Burleigh, Anstruther and Chandos.

John H. Delamere, Minden, Haliburton: There is very little fall wheat sown here, but what there is looks remarkably well.

James Clare, Hungerford, Hastings: Fall wheat in this township has wintered well and has a great growth this spring; never saw a better prospect.

Wm. Watt, jr., Wollaston, Hastings: Very little fall wheat was sown, but what was sown looks well; the soil is sandy loam.

Moses Davis, Morrison, Muskoka: Fall wheat is not good, it was frozen where the snow went off early. Some farmers have all their wheat ground to plough up.

H. Armstrong, McKellar, Parry Sound: Fall wheat is excellent, but very little has been sown.

A. McNabb, Thessalon, Algoma: Fall wheat is looking well; not much has been sown, and that only on light land.

FROM THE AUGUST REPORT (AUG. 2.)

P. J. Freeman, Rochester, Essex: A good deal was winter-killed, but that which escaped has done well, and although in some places thin on the ground has ripened well, and will turn out well when threshed.

Dan. Stewart, Tilbury W., Essex: The Michigan Amber was injured by the midge in this locality; other late sown wheat rather thin on the ground, but grain of good quality. All got into stack and barn in good condition, and a number have threshed. Self-binders are getting more common; labor supply good.

Wm. Millen, Gosfield, Essex: Mostly all hurt with midge or weevil, especially Egyptian and such varieties, but Scott and Seneca were not injured. Excellent weather and condition good. Plenty of laborers; not many self-binders in use.

E. B. Harrison, Howard, Kent: In low places wheat much injured and worthless on account of cold winds and freezing. Only slightly injured by rust. The condition at harvesting was good, but the wheat ripened very unevenly; quality good. Sufficient labor and to spare. Self-binders were used almost to the exclusion of all other labor. Wages about $1 *per diem*.

John Wright, Dover, Kent: The wheat crop is rather light in straw; it was injured by winter frosts and summer drought, but the head is well filled and the berry good. The crop was cut a little green, but has been secured in good condition.

John Bishop, Orford, Kent: Wheat was got in in good condition. The weather was cool and the grain ripened slowly, and is good and plump. It will turn out well for the straw.

F. B. Stewart, Raleigh, Kent: Good average, and excellent quality; plump and no appearance of rust. Laborers plentiful at $1.25 per day, with dinner. Self-binders quite common.

D. Campbell, Dunwich, Elgin: I do not think it was injured any since last April, but on the contrary the weather was very favorable. What, in my opinion, hurt the crop was want of snow and very frosty weather followed by a thaw, coating the fields with ice. In spring we had cold rains, frequently accompanied by a great deal of cold, bleak east wind. This prevented the soil from getting warm and dry when it should. No perceptible injury by insects or rust. Fall wheat secured all right; grain good and plump. Labor supply ample; self-binders numerous; harvest wages $1.25 to $1.50 a day and board, and about $23 a month with board and lodging.

Wm. Clarke, Aldboro', Elgin: Fall wheat on poor soil badly winter-killed; on good soil an extra heavy crop; straw bright, grain plump and good.

J. Robinson, Southwold, Elgin: The Democrat wheat, the principal kind sown around here, is plump and good. It received little or no injury since the winter. The Martin Amber is late in ripening, and was struck with rust; the top of the heads did not fill. The bulk of the wheat crop is in the barn; the quality of the grain is excellent. Self-binders are coming into general use and are working pretty well.

W. W. Wells, Woodhouse, Norfolk: Fall wheat was completely waterlogged in April, and only well drained or high and rolling lands have good crops. All low lying fields are very poor. No insects, rust or other blight affected the crop. The quality will be number one. Labor supply plentiful, and self-binders thicker than grasshoppers. Wages about $1.50 per day, and about $18 for six or eight months.

E. M. Crysler, Charlotteville, Norfolk: Wheat was badly winter-killed, but the favorable weather helped it to recover a good deal. There will be an average of about fifteen bushels per acre. Wheat will be a good sample. Rain has retarded hauling in, but I think has done no injury. Plenty of labor; wages about $1.25 per day; very few binders used.

Joseph Martindale, Oneida, Haldimand; Commenced to cut fall wheat on the 19th July; it will only be half a crop—say twelve bushels per acre; cause, winter-killing. The sample is good. Some is in the barn, but the most of it still in the shock. There is so much grass in it that it takes quite a while to dry out. When wheat is winter-killed grass and rubbish will grow.

John Bradford, Dunn, Haldimand: Fall wheat is a very good berry, but is badly winter-killed. Any fields that were sheltered by bush are a good average crop. Began cutting July 16th.

F. A. Hutt, Stamford, Welland: Somewhat injured by spring frost and rain on low land, but a good, plump berry, and where plentifully manured and early sown on well drained soil a most abundant yield. No injury by the weather, rust, insects or other causes. Self-binders used everywhere with the greatest satisfaction, making the labor supply more easy. Wages one dollar with board.

John McFarlane, Sarnia, Lambton: Fall wheat looked poor early in the summer, but picked up wonderfully and on the whole has been a fair crop, with some excellent fields. The grain is a fine sample.

E. Bowlby, Brooke, Lambton: No harm to the crop during the summer except that one kind called the Sifton seemed to be blighted; supposed to be caused by too much dry, hot weather.

A. A. Meyers, Sombra, Lambton: Fall wheat is of the very finest quality—plump and large—and will yield as much per acre as in any former year; possibly in many cases as much as 40 bushels per acre.

Andrew Childs, Dawn, Lambton: The wheat crop in this neighborhood is generally good in quality, but as much was destroyed during winter and early spring the average yield will be rather low. All is now secured.

Alfred Carr, East Wawanosh, Huron: Fall wheat is a very uneven crop this year; some extra heavy and some very poor. A good deal was badly winter-killed and quite a percentage was badly eaten by Hessian fly, which was prevalent in the fall. I have seen some crops completely broken down at the first and second joint when headed out.

E. Cooper, Howick, Huron: Fall wheat thin on the ground, but well filled. It received no injury from any source except an insect that worked at the joint, but did not injure it to any extent.

John Varcoe, Colborne, Huron: Fall wheat this year will be a good crop in almost every case where it has had any chance in soil and cultivation. Some late fields will be affected a little by rust and a few are injured by the joint worm. A large part of the crop is saved in good condition.

Thomas Welsh, Huron, Bruce: Fall wheat generally a fine crop, well filled; rusted where winter-killed, but not to the same extent as some years.

Peter Reid, Kinloss, Bruce: Injured by weevil or grub eating at the lower joint, causing the stalk to fall. A good deal of rust has appeared.

James Tolton, Brant, Bruce: Crop excellent; the best we have had for three years; will average 30 bushels; not injured by rust or other causes.

James Johnston, Carrick, Bruce: The fall wheat has not suffered from the weather. The Clawson wheat is badly broken down by a worm about the lowest joint of the straw.

Daniel Marshall, Keppel, Grey: Fall wheat, where not winter-killed to make it thin, will be an abundant crop. What is late will be touched with rust, a very little.

J. M. Rogers, Sydenham, Grey: Fall wheat has improved greatly since last report to the Bureau. It has tillered nicely; the heads are long and are well filled with grain of a good sample.

Robert Dunlop, Euphrasia, Grey: The fall wheat is of a good quality. In some places a little injury was done by spring frosts. No damage was sustained in any other way.

H. McRae, Bentinck, Grey: The fall wheat is not injured by weather, but is seriously injured by weevil or some other insect in the lower joint of the straw, causing one-third of it to fall. It is otherwise in good condition.

George Binnie, Glenelg, Grey: Fall wheat that escaped the effects of winter is good, with large heads and good sample, though it is somewhat straggled and broken down at the root, possibly caused by the ground being too loose and dry.

John Morice, Normanby, Grey: Fall wheat is very patchy, ripening unevenly. There is no rust. An insect has cut the grain in some fields pretty badly, just above the ground.

W. R. Rombough, Normanby, Grey: Fall wheat is only about half a crop, and is badly injured by the Hessian fly. There is very little rust. The sample is good.

James Farney, Flos, Simcoe: The fall wheat was badly winter-killed and only remains in small patches around the fences, two or three acres in a patch. It looks very promising, with a splendid berry.

George Sneath, Vespra, Simcoe: There is very little fall wheat in the township. Nearly all that was sown was winter-killed. What little there is is just being harvested. The straw is bright, and the grain a good sample.

George Cowan, Innisfil, Simcoe: Fall wheat harvesting commenced about the 20th July. The sample is good, but there is not much grain. There is some to cut yet, which is rusted and will not be a good sample. In some places there is an insect attacking the joint.

W. W. Colwell, Essa, Simcoe: Fall wheat was very generally winter-killed in all this section. I never saw so much ploughed up before. What wheat did survive was good and full. No injury to crops except a little from late frosts.

W. D. Stanley, Biddulph, Middlesex: Owing to dry, cold winds early in the season, and drought later on, the fall wheat on the whole is very light and considerably below an average. The fields are very patchy.

A. Sharp, Delaware, Middlesex: The wheat is a fair crop, but some late pieces on low lands were injured by rust and some by spring and summer frosts—not, however, to any great extent. Cutting commenced 12th July and the crop was saved in good condition. The quality of the grain is good.

J. A. Glen, Westminster, Middlesex: Fall wheat is harvested in good condition and is threshing out a fine sample. On clay lands the return is 30 to 35 bushels to the acre, but what the general average will be it is impossible to estimate. Perhaps 20 bushels will be about it, as we always hear of the good returns and seldom hear of the failures; those who have large returns like to tell it, while the others are silent. Winter-killing was the prime cause of failure; the weather for ripening was all that could be desired.

James Alexander, Ekfrid, Middlesex: Fall wheat has improved much since my last report, and I think my own will run 25 bushels or more per acre, half-killed patches included. Wheat has received very little damage from weather or insects, and it has been harvested and secured in excellent condition. The quality of straw and grain is first-class.

J. Grimason, Caradoc, Middlesex: A pretty fair crop, only I think it ripened rather soon, owing to the dry weather. On the whole it is a great deal better than I thought it would be in the spring, and is nearly all harvested in this locality.

E. H. Brown, East Nissouri, Oxford: Only half a crop; it was injured by frost in spring, rust affected it more or less, and it ripened unevenly.

John F. Tribe, Dereham, Oxford: The wheat looks well and is all harvested in good condition. The sample is good and plump, and the crop will average, by appearance through the township, 27 bushels per acre.

William Brown, Blenheim, Oxford: Fall wheat is a fair crop and will average about 22 bushels per acre, I think; the grain is plump and good.

Thomas Baird, Blandford, Oxford: Fall wheat has greatly improved since the May report was sent in. At that time it looked like a three-quarters crop, but now I can safely say it will be a full average of beautiful, plump grain—free from rust and for the most part from insect pests.

Thomas A. Good, Brantford, Brant: Fall wheat was badly hurt by ice, frosts and water last winter, but what was left promises to turn out well to the straw and will be far better than we expected. Some late wheat is a little burnt with rust, and I noticed a little midge, but not enough to hurt the crops. Cutting commenced about 20th July.

Thomas Lunn, Oakland, Brant: Harvest began about 19th July. The wheat has done very well, considering the severe winter and the appearance of the crop in early spring. The straw is much shorter than last year, which lessens the labor of harvesting and threshing. The heads are large and well filled.

John Campbell, Blanshard, Perth: Fall wheat on dry drained land is a fair crop, but where the land is low it was injured to a considerable extent by winter-freezing and recently by rust. Cutting began here about 15th July and the grain is nearly all cut now. Binders are all the go.

William Lang, Downie, Perth: Fall wheat is generally good here and has been saved in splendid condition. Democrat and Boyer have done well, and I believe there are some good fields of Martin Amber.

D. McLean, Ellice, Perth: Fall wheat was partly injured by the spring weather and continued spotted and thin. The green spots are a little rusty and the Hessian fly has done a little harm, but the yield will not be affected much. Cutting commenced about the 22nd of July, and became general about the 27th. It has been raining more or less every day since the 25th, but if the wheat can be got in dry it will pass for No. 1.

W. Whitelaw, Guelph, Wellington: Generally very good and much better than was expected early in the spring. The quality of the grain is first rate, though it ripened very uneven owing to some being injured by winter frosts and other causes; no injury by rust or insects. Many fields will yield from 30 to 40 bushels per acre. Cutting commenced about 26th July and the crop is being secured in fine condition.

Charles Nicklin, Pilkington, Wellington: Better than for four or five years; even on late fields the wheat is very well filled. No insect pests and no rust to hurt the wheat of any account; enough rain to suit nicely, and cool nights have been the very life of it.

James Cross, Peel, Wellington: The wheat in this township has turned out well, except the late sown on low mucky land, which is affected some by rust. Cutting began on 20th July, and will be finished this week. Every man with 200 acres has a binder, and wages are not so high as last year.

Thomas Mitchell, North Dumfries, Waterloo: The wheat is very good where not winter-killed. It is almost free from rust, but there is more midge than we have had for years. Cutting commenced about 15th July, and the crop has been secured in fine order. The quality of the grain is much better than last year.

John Cornelius, East Garafraxa, Dufferin: The fall wheat is not an average crop in this locality. It was greatly damaged by ice, and will not average more than ten bushels to the acre.

H. McDougall, East Luther, Dufferin: The wheat is a good sample, but light in many places. Although the crop wintered well, the wet and cold spring destroyed much of it, so that some fields were ploughed up and sown to barley late in the spring.

Adam Spears, Caistor, Lincoln: Fall wheat has improved, but ripens unevenly by reason of the frost in winter. There will be considerable shrunk wheat, as rust is affecting the late grain.

E. D. Smith, Saltfleet, Wentworth: Fall wheat was frozen badly in winter, but what was left came on well, and will yield from half to two-thirds of a good crop. It is all secured in excellent condition.

Robert Inksetter, Beverley, Wentworth: The fall wheat was badly winter-killed—more than we thought in the spring. It ripened very unevenly. Some spots are quite green, while others are dead ripe, which will affect the sample.

W. M. Calder, Glanford, Wentworth: Much of the fall wheat was badly winter-killed, leaving it in many places scarcely thick enough for half a crop. What was left seems to have filled pretty well, and escaped injury from any cause. Part of it has been secured in very good condition, though probably more than half of it is still in the field.

Wm. McDonald, Esquesing, Halton: Fall wheat in this locality will be near an average crop, having greatly improved since the May report. Rust did little or no harm. Fields ripened unevenly, so that some of the wheat was too ripe before the rest was fit to cut.

Adam Alexander, Nassagaweya, Halton: What wheat escaped the terrible winter has done well, and will be a good sample. I notice an insect eating the kernel after it is ripe.

Alex. McLaren, Caledon, Peel: Fall wheat was winter-killed at least twenty-five per cent. The balance has come in in good condition and yield, but late.

Peter McLeod, Chinguacousy, Peel: Fall wheat was injured a good deal by frosts in the early spring. I should judge that one-third would be cultivated and put in for spring crop. What was left has picked up well. The quality of the grain is good.

J. D. Evans, Etobicoke, York: Fall wheat was badly winter-killed. What little was left came on fairly well and was not otherwise injured except by rust on late grain. The quality is good.

John Beasley, King, York: Fall wheat was not injured by the summer weather. Some fields were partially killed out in winter, but I have never seen wheat recuperate and stool out better than it has this season. The grain is plump and bright.

Thomas Scott, North Gwillimbury, York: Fall wheat was very patchy, but it has filled well, and will yield largely for the amount of straw. The grain will be of good quality.

George Evans, Georgina, York: Fall wheat was badly winter-killed, a great deal being ploughed up or re-sown. What was left has done well, being well filled, and no rust or insects damaging it.

R. S. Webster, Scott, Ontario: Fall wheat was badly winter-killed in this locality. The greater portion was ploughed up in spring. The grain was harvested in good condition.

Joseph McGrath, Mara, Ontario: In new, fresh land fall wheat is a very good crop—as good as in former years. Other fields were ploughed up, and some that were left might as well have been ploughed. On the whole it will be about half a crop.

William J. Grandy, Manvers, Durham: Fall wheat is a good crop, very little affected by insects and none by rust. The crop is secured in good condition.

James Brock, Cavan, Durham: The fall wheat in some places was badly killed in spring, but in others the crop is a fine one.

John Riddell, South Monaghan, Northumberland: Fall wheat is over an average crop—a large crop of straw. There was no rust or insect pest. Cutting commenced as early as the 10th July and was quite general by the 16th. The wheat shot up irregularly and ripened the same, yet the late is quite as good as the early, being plump and well filled.

David Allan, Seymour, Northumberland: A very fine crop; quality and yield good; and I think nearly all secured without any injury from the rains we have had.

M. Morden, Brighton, Northumberland: Exceptionally good in yield and quality. The crop is about all secured in good condition.

A. J. File, M.D., Ameliasburgh, Prince Edward: Fall wheat has turned out a good crop, very little winter-killed, and not injured by insects or other causes. It has been saved in good condition, and the quality is good.

Samuel N. Smith, Sophiasburgh, Prince Edward: Fall wheat is looking well. Only a few farmers here grow it, but it gives good satisfaction this year to those who have it.

Leonard Wager, Sheffield, Lennox and Addington: Fall wheat harvesting commenced on the 20th of July. Grain plump and said to be the best crop ever raised in this township; but since harvesting commenced it has been very showery weather, so the greater part of the crop stands in shock in the fields.

C. R. Allison, South Fredericksburgh, Lennox and Addington: Very little sown; quality good; not a heavy crop; injured by spring frosts. Harvesting commenced about the 19th of July.

R. J. Dunlop, Pittsburg, Frontenac: Good, but little sown last autumn on account of wet, unfavorable weather.

David J. Walker, Storrington, Frontenac: Wheat harvested in favorable weather and what was sown is a good crop, and the quality of the grain No. 1.

Isaiah Wright, Augusta, Leeds and Grenville: Winter-killed in some places where not summer-fallowed, but of excellent quality and mostly all harvested in good condition.

G. D. Dixon, Matilda, Dundas: Nearly all ploughed up in the spring. What was not ploughed up was very good.

A. Farlinger, Morrisburg, Dundas: Is turning out to be nearly an average crop.

R. Anderson, Cornwall, Stormont: A hail storm passed through the township on the 29th July from north-west to south-east, about three-quarters of a mile in width, and nearly destroyed all the grain and vegetable crops in its course. The quantity of fall wheat is small, but what there is is good.

R. Serson, Fitzroy, Carleton: There is very little fall wheat here, but it is in good condition. It received no injury from bad weather, rust or insects.

P. R. McDonald, Osgoode, Carleton: The fall wheat is badly winter-killed; what escaped looks well; no injury.

John Carter, Brougham, Renfrew: Not much grown. What is grown this year looks well, and I believe it would be a better paying crop than spring wheat.

Patrick Corley, South Sherbrooke, Lanark: Fall wheat was injured in some spots by the January thaw, but it is a very fair crop, and the quality of the grain was very good.

John H. Fraser, Drummond, Lanark: Fall wheat is good where not winter-killed. Slightly injured by frost in spring, and by rust. Most of it is secured in good condition. The grain is good.

John Westlake, Eldon, Victoria: Fall wheat is all cut, and is the finest crop grown here for years. It was not so thick on the ground as in some years, but it is well filled.

Nelson Heaslip, Bexley, Victoria: The cutting of fall wheat commenced about July 20th. The grain is plump and the heads well filled; but the straw is light, having been injured by winter-killing about twenty per cent.

John Moloney, Douro, Peterborough: Fall wheat is one of the best crops ever produced here. The berry is very plump and sound.

F. Birdsall, Asphodel, Peterborough: Fall wheat has not been injured by the weather, insect pests or rust. Its condition is good, the heads being well filled. The quality of the grain is No. 1.

Thomas Telford, Ennismore, Peterborough: During my residence of 30 years in this township I never saw a finer crop of fall wheat. The grain is sound and plump.

F. R. Curry, Anson and Hindon, Haliburton: Fall wheat is excellent and has received no injury from any source. The grain is very good.

Stephen Kettle, Glamorgan, Haliburton: Fall wheat looks better than ever I saw it here. It has received no injury through the summer. Frost in spring killed out one or two pieces that lost the snow very early.

George Monro, Tyendinaga, Hastings: I never saw much better fall wheat than we have this year. It was not hurt in winter or summer.

A. McNabb, Thessalon, Algoma: Fall wheat looks well this year. We commenced cutting about the 26th July.

SPRING WHEAT.

The comparative failure of spring wheat in 1885 had the effect of very largely decreasing the acreage put under that crop last spring, and although the results of the year's operations have not been so unsatisfactory as those of 1885, they have not been such as to encourage an extension for the coming season. As will be seen from the table annexed, the aggregate yield of spring wheat for the year was some 400,000 bushels greater than that of 1885, while the area sown was some 200,000 acres less, showing a very substantial increase in the average yield. The increase was most notable in the Lake Ontario counties, where it amounted to seven bushels per acre. At the same time, there was a smaller proportionate decrease in the acreage in this particular group of counties than in some of the others, owing to a large extent of the fall wheat ground being ploughed up and re-sown with spring wheat. From the outset the crop throughout the greater part of the province had to contend with numerous enemies, the most formidable of which was the severe drouth of last summer. In nearly all the counties west of York and Simcoe this agency had a very serious adverse effect on the yield, causing a thin stand, short straw and light heads. In addition to the drouth, the crop had to contend with the usual insect pests, many correspondents complaining of the presence of wire-worm, Hessian fly and midge, while in not a few localities rust and blight were added to

the list of visitations. The August reports very generally agreed in predicting failure from all these causes, but it is satisfactory to note that the final results hardly verified their gloomy forebodings. In most of the counties of the western part of the province the yield may, generally speaking, be considered a very inferior one, the result in great measure of the severe drouth. The sample in these counties is usually reported as more or less shrunken, owing to drouth and rust. The only western counties which may be taken as exceptional to this condition of things are Grey, Simcoe and Dufferin, where there appears to have been at least a fairly good yield, and where the sample is generally reported to be excellent. The same remark applies to considerable areas in the Lake Huron counties, and in a much more limited sense to occasional localities in the West Midland counties and those bordering on the extreme western end of Lake Ontario. The failure is almost invariably reported to be most conspicuous in the old and bald varieties, while some of the newer and bearded sorts have frequently yielded well in the midst of surrounding failure. Coming now to the eastern part of the province, beginning with the county of York, it is pleasing to note that the fears expressed by so many correspondents during the maturing season, of serious visitations by rust and insect pests, proved almost entirely groundless. It is true that there was an occasional report of damage by rust on late fields, but the general tone of the returns was exceedingly favorable. This was particularly the case in the St. Lawrence and Ottawa and East Midland groups, though in some parts of Hastings, Carleton, Renfrew and Lanark the reports were more varying in their character. On the whole, the year's crop of spring wheat proved much better in point both of yield and quality than seemed likely when the returns were made for the August report. Its history thus differs widely from that of the previous year's crop, which began with very fair promise and ended in decided failure. The acreage and product are shown in the following table :

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	14,031	204,112	14.5	25,624	359,494	14.0
Lake Huron	46,839	640,290	13.7	78,986	815,512	10.3
Georgian Bay	74,417	1,250,892	16.8	95,944	870,417	9.1
West Midland	90,160	1,287,167	14.3	154,946	1,491,263	9.6
Lake Ontario	152,516	2,715,962	17.8	212,364	2,297,866	10.8
St. Lawrence and Ottawa	122,887	2,152,736	17.5	131,240	2,223,007	16.9
East Midland	68,689	1,142,845	16.6	91,478	935,464	10.2
Northern Districts	7,926	124,549	15.7	8,881	136,858	15.4
Totals	577,465	9,518,553	16.5	799,463	9,129,881	11.4

The column of averages for 1886, though showing no very high figures, compares very favorably with that of the previous year in all the districts.

FROM THE AUGUST REPORT.

Daniel Stewart, Tilbury West, Essex : Not much sown in this locality. What there is is light and is not all harvested yet.

C. Coatsworth, Romney, Kent : All ready to cut or being cut. The dry weather has affected the crop, and it will be short and not extra plump.

D. Campbell, Dunwich, Elgin : Spring wheat promises very fair. Plant healthy, good large heads, filling nicely, but the hot, dry weather of the past three weeks has had a tendency to make the crop thinner than it would have been with more cool, showery weather.

A. N. Simmons, Middleton, Norfolk : Not much grown in this section. What there is looks well and bids fair to give an average crop.

J. R. Martin, North Cayuga, Haldimand: Not much grown here and of very little account this year. Not yet matured, and looking thin and rusted.

John Morrison, Plympton, Lambton: Is a very light crop; the drouth seemed to affect it. However, the weather has been very favorable lately and it is filling out well.

J. H. Patterson, Dawn, Lambton: But little sown here and the season has been far too dry for it on clay land. Still, some pieces on fine soil look middling well for the season.

Hugh McPhee, Ashfield, Huron: Cold temperature at an early stage of growth caused it to turn yellow and destroyed some of the seed, which has rendered it thin. The continued drouth was also unfavorable.

Walter Hick, Goderich, Huron: Not much spring wheat sown here now, it has failed so badly the last two or three years. I hear that what there is of the bald varieties is looking bad. The Arnetka or goose wheat looks well so far.

Alex. McEwen, Hay, Huron: Spring wheat looks pretty well so far. I have about five acres of California Defiance which looks splendid. The bearded varieties seem to do better, such as the Defiance and the McCarling.

John Douglass, Arran, Bruce: Very little spring wheat sown now. It has not been doing very well the last few years in this place, which was once one of the best spring wheat townships in the country. What is sown looks fairly well at present.

James Shearer, Egremont, Grey: There is a great diversity of appearance in this crop, some looking well and some very poor. The Hessian fly is at work in it and I think the midge is present likewise, so I think the yield will be very small.

George Binnie, Glenelg, Grey: Spring wheat is generally poor, thin, short and small heads. This crop seems to be more and more a failure in this section. Probably one of the causes this year was poor seed. It was small, shrivelled up stuff, not capable of producing strong plants.

B. R. Rowe, Orillia, Simcoe: This crop looks well but late, which will make it liable to rust. None will be harvested for a fortnight. Should it escape rust there will be a good return.

W. D. Stanley, Biddulph, Middlesex: Rather light; I saw no appearance of rust or insect, but the drouth has been hard upon it. There will be none cut for ten or twelve days.

Wm. Elliott, W. Williams, Middlesex: A general failure in this and surrounding townships.

J. T. Coughlin, Westminster, Middlesex: Spring wheat I think is almost a failure; it is short and light, and will not make half a crop.

A. Robinson, McGillivray, Middlesex: Looks as if it would be a fair crop. It looks thin on the ground but well headed.

E. H. Brown, E. Nissouri, Oxford: It is a failure, rust having taken it.

James Anderson, E. Zorra, Oxford: Injured by wet weather in May; struck with rust about June 1st and considerable midge. Some pieces good, some fair, and the bulk very poor. Some ripe now (August 1st) and some very green as yet. On the whole, will scarcely be half a crop of fair quality.

Thomas Lunn, Oakland, Brant: Very little sown; a poor crop; caught by the rust.

John Campbell, Blanshard, Perth: Spring wheat looks rather stunted. The midge is showing itself, also rust, so the prospects are not very bright.

A. McLaren, Hibbert, Perth: Short in straw; almost a failure; the result cannot be estimated yet. In some cases it has been cut for green feed.

H. McDougall, Guelph, Wellington: Spring wheat looks thin and ragged. I do not think it is going to do much.

Alex. Kerr, Pilkington, Wellington: The crop looks well at present, but not so much sown as usual.

W. C. Smith, Wilmot, Waterloo: Very little sown; it is thin on the ground; hardly half a crop.

Peter Winger, Woolwich, Waterloo: Not much sown this year. It will be an average crop.

John Snyder, Wilmot, Waterloo: Spring wheat promises to be full and plump; no rust yet.

John Cornelius, E. Garafraxa, Dufferin: Spring wheat looks well so far; I do not see that it has been injured by either rain, frost or drought.

R. Gray, Mulmur, Dufferin: Looks light on the ground and short.

A. H. Pettit, N. Grimsby, Lincoln: Spring wheat late on account of the wet spring and the dry weather for the last month. No insects or rust as yet. The crop will be thin on the ground and the straw short as a rule.

James Stull, Grantham, Lincoln: This crop will not be very heavy. Most of it was got in too late for a good crop. Very little cut up to date.

John Ireland, Ancaster, Wentworth: Very little grown; what there is is looking fair; not yet ripe for harvesting.

Adam Alexander, Nassagaweya, Halton: Very little sown: the very dry weather will likely cause it to shrink badly like last year.

W. C. Ingelhart, Trafalgar, Halton; There is prospect of a fair crop; injured to some extent by midge.

John Campbell, Chinguacousy, Peel: In most cases thin and backward, owing to wet in spring.

Joseph McKay, Toronto, Peel; Spring wheat is hurt by midge.

Angus Ego, Georgina, York: Very promising; no rust yet; seems to be filling very well.

D. B. Nighswander, Markham, York: Spring wheat fair; some weevil in White Russian variety; Wild Goose wheat not materially affected by any causes.

Wm. W. Findlay, Scarboro', York: Looks well, though there is considerable midge in some of it. Will be ready for cutting about 10th inst.

Thomas Scott, N. Gwillimbury, York: Early sown is coming in good, but there is rust on later sown; it is too soon to tell to what extent it will hurt it. The midge is taking considerable.

John Christie, Reach, Ontario: Spring wheat looks well; no damage done so far by weather, rust, etc.

R. S. Webster, Scott, Ontario: Present prospects are that we shall have a No. 1 sample, but light straw. Ears are now well filled, and I intend to start the reaper in spring wheat on Monday, 2nd inst.

E. Hodges, Whitby, Ontario: Doing well at present, but if this wet, hot weather continues it will be damaged by rust, and in some places it is beginning to appear now.

James Brock, Cavan, Durham: The spring wheat is not ripe in this vicinity as yet, but the heads seem plump and full. I think there is a little rust showing on the straw. It is thin on the ground I think on account of the wet spring.

R. Windatt, Darlington, Durham: Suffered by cold and drouth, midge in a few places.

Wm. Lucas, Cartwright, Durham: Will be short in the straw, but well eared and has not suffered by the weather, nor as yet by rust or insects.

John Williams, Hamilton, Northumberland: Less than the usual acreage this year, and the crop will be rather below the average, although there are some good fields. Injury by the Hessian fly in some places, and some hilly land badly washed by heavy rains soon after sowing time.

John Riddell, S. Monaghan, Northumberland: Thin and light crops; variety mostly the White Russian, which appears about run out. Some Colorado, a newer kind, promises better. Indications of rust the last ten days, and in some fields a good deal of weevil. On high dry land where free from rust and weevil the grain is plump.

Samuel N. Smith, Sophiasburgh, Prince Edward: Spring wheat is a poor crop generally. It was hurt by the dry summer, and the weevil has been very busy in the wheat that was sown early. The late sown is not far enough advanced to tell how it will come through, but a very small crop at the best.

James Cooper, Marysburgh South, Prince Edward: Very poor; some ploughed up.

C. R. Allison, South Fredericksburgh, Lennox and Addington: Spring wheat promises to be a good crop; no weevil to be seen and it is filling well. Not yet fit to cut.

John Sharp, Ernesttown, Lennox and Addington: Spring wheat not a very good crop; short in the straw and thin on the ground. The heavy snow storm in April with little frost in the ground left the soil heavy and dead. There was heavy rain in the fore part of May and cold weather, after which a drouth set in until about the 25th of May, which caused the wheat not to stool.

Alex. Ritchie, Storrington, Frontenac: Not as much sown as last year. Dry weather has made the crop short and thin. None harvested yet; will be in a few days.

John B. Wilson, Lansdowne Front, Leeds: Thin on the ground but fairly well-headed. Some pieces are rusted, but rust not general. Dry cold weather in June was hard on it. None ripe yet.

S. Edgar, Kitley, Leeds: Good; not injured in any way except slight rust in late sown.

A. Harkness, Matilda, Dundas: Looking well and promises to be something more than an average crop.

Robt. Vallance, Osnabruck, Stormont: Fair; partly ripening.

Kenneth McLennan, Lochiel, Glengarry: Spring wheat on high land looks well, but on low land is thin owing to cool weather in the early part of summer. None ripe yet.

James Clark, Kenyon, Glengarry: Spring wheat on many places was badly cut with the grub worm. Notwithstanding this fact, the weather being favorable it will yet be a fair crop.

Wm. Ferguson, Hawkesbury W., Prescott: Spring wheat never looked better than this year. I think it will average 20 bushels to the acre all through; some fields will yield more.

James Sieveright, Gloucester, Carleton: Spring wheat is a good crop; above an average on many fields. Rust is appearing, but what damage it may yet sustain I could not say.

R. Serson, Fitzroy, Carleton: Does not promise well; badly affected by rust and weevil, with weather favorable for the production of both.

John O'Callaghan, North Gower, Carleton: Spring wheat good; none ripe yet owing to the wet cloudy weather. It may rust yet.

H. A. Schultz, Sebastopol, Renfrew: Rust has affected it, but should warm, dry weather set in now the injuries from that cause will not be so much.

Peter Anderson, McNab, Renfrew: Very good; affected by rust in low places.

John M. Cleland, Darling, Lanark: Affected a little by drought early in season, but now looking well.

Andrew Wilson, Ramsay, Lanark: Very good where not affected by rust. Our agricultural society brought in 650 bushels of Red Fyfe wheat from Manitoba and sold it to the farmers for seed. It has done extra well; will be ripe next week.

Peter Clark, Montague, Lanark: Has plenty of straw, but is injured by weevil and threatened with rust from too much moisture.

Nelson Heaslip, Bexley, Victoria: Spring wheat promises to be above an average crop. The straw is not heavy, but the period of danger is not past. The earliest will be ready to cut about the 18th or 20th inst.

John Campbell, jr., Mariposa, Victoria: Very promising, though slightly affected by rust; no other injury.

James S. Cairnduff, Harvey, Peterboro': Spring wheat is promising since the rain in July. The drouth affected the crop in spots, but it has improved wonderfully of late. Will be ripe in two weeks.

John Moloney. Douro, Peterboro': Fair average crop; promises to be a good, plump berry.

Henry Ferrier, Stanhope, Haliburton: Spring wheat looking well; no damage yet.

George Monro, Tyendinaga, Hastings: Early sown is very good, but what was sown about the 10th and 15th of May is badly destroyed by weevil.

J. Early, Chaffey, Muskoka; Will be a good average crop; not damaged to any extent from any cause.

H. Armstrong, McKellar, Parry Sound: Promising well; some report weevil.

A. McNabb, Thessalon, Algoma: Spring wheat, to all appearance, will be a light crop.

BARLEY.

The barley crop of last year exceeded that of 1885 in acreage and quantity, and on the average the quality was also better, particularly in point of color. The season was not a favorable one for the production of a large yield, as the rains in spring either retarded sowing or partially destroyed the seed, while the long drouth of June and July kept back the growth. As a consequence of this the straw was very short, and in many places the stand was thin on the ground. Fortunately, the drouth was broken before the grain became quite ripe, a circumstance which led to a great improvement in the sample in point of weight. Over almost the whole province, indeed, there was little complaint of small or shrivelled grain, such complaints being chiefly confined to the western counties, where the drouth was most severe. In a few places in the northern part of the province some damage was done by spring frosts, and two or three reports from western counties mention slight injury from the same cause. Rust affected late grain in a few localities, mostly in the east. With regard to color, the report for 1886 is much more favorable than that for the preceding year. Throughout the greater part of the western counties the harvest weather was most propitious, and the grain was secured in fine condition. In the counties bordering on the lakes and Georgian Bay showers were frequent enough in the early part of August to cause some injury, but in even these at least two-thirds of the grain escaped almost or quite unstained. From York and Simcoe eastward the yield was better and the color worse than in the western counties, on account of the greater rainfall. Some fields in the Lake Ontario and West Midland counties were harvested before the August rains came on, and yielded a bright sample, but in the great majority of cases the grain was more or less discolored. It was still, however, superior in that respect to the crop of 1885, and over the whole province there was a much greater proportion of high grade barley. Almost all the districts, in fact, possessed some of the desired "No. 1 bright." The acreage of barley was very much increased over that of the year before, owing largely to its being sown on ground where the fall wheat had failed. It was also tried by many farmers in the east who were dis-

gusted with the repeated failures of spring wheat. A detailed comparison of the two years is given in the following table:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	35,551	898,038	25.3	30,410	861,857	28.3
Lake Huron	53,682	1,502,186	28.0	44,150	1,269,767	28.8
Georgian Bay	54,012	1,423,407	26.4	41,586	1,055,320	25.4
West Midland	117,720	3,328,576	28.3	95,506	2,818,803	29.5
Lake Ontario	294,743	7,822,742	26.5	237,144	6,720,814	28.3
St. Lawrence and Ottawa	87,917	2,208,651	25.1	82,171	2,116,612	25.8
East Midland	89,748	2,273,180	25.3	64,801	1,640,036	25.3
Northern Districts	2,405	55,498	23.1	2,105	50,378	23.9
Totals	735,778	19,512,278	26.5	597,873	16,533,587	27.7

From this it will be seen that the crop of last year was much greater than that of 1885 in the aggregate, while the average yield per acre was somewhat lower.

FROM THE AUGUST REPORT.

Wm. Millen, Gosfield, Essex: Barley is good, bright and a fair crop. Some of it is a little short on account of the drought.

R. H. Waddell, E. Tilbury, Kent: Barley is about a fair average; sample fair, color good. It has nearly all been housed in good order.

John Haggan, Malahide, Elgin: Barley is a good crop, but liable to be colored by the late rains. None housed as yet around here.

A. N. Simmons, Middleton, Norfolk: Barley has been harvested in good condition, with good prospects of a fair yield of grain.

John Bradford, Dunn, Haldimand: Barley a very good crop, but not much grown, and will be slightly discolored by rain.

Alex. Reid, Crowland, Welland: Barley is backward and will be a short crop, owing to the drouth.

A. A. Meyers, Sombra, Lambton: Barley is a splendid crop, bright, and harvested in good condition. The drouth did not affect it.

R. Fleck, Moore, Lambton: Barley is a fine crop, though short in the straw. About two-thirds will be colored by recent showers.

Wm. Richmond, Morris, Huron: The barley is very good; there is a great deal cut and will be secured in good condition; more will sow barley next year.

John Wright, Goderich, Huron: Barley is good; some of it was cut on the 19th July; it has been rather showery to get it in in first-class condition.

John Douglass, Arran, Bruce: Barley will be a good average crop; there is not a large acreage sown this year, as the price has been low for some time.

P. Corrigan, Kinloss, Bruce: Barley is very short; the sample will be good and bright.

Robert Carruthers, Artemesia, Grey: This is a very inferior crop, as a great many fields looked more like a summer-fallow than anything else until lately.

James Cannon, jr., Sydenham, Grey: Barley is a good crop, and a good deal of it is secured in fine condition.

R. T. Banting, Essa, Simcoe: Barley is an average crop; some of it is cut, but very little housed. The recent rains will have a tendency to darken the color.

John Darby, Vespra, Simcoe: Barley took the place of a good deal of wheat that was ploughed up. Considerable has already been harvested, partly in good condition, and some colored with the rain. There is a fair average crop.

Peter Stewart, West Williams, Middlesex: Barley is the best crop for years; it is about all harvested and in good condition.

W. W. Revington, Biddulph, Middlesex: The sample is good and bright, the straw short. There was more barley sown than formerly.

Thomas Baird, Blandford, Oxford: Barley for the most part will be a fine sample, but will not be as heavy a crop as last year, though I believe it will be close on an average.

Thomas A. Good, Brantford, Brant: Barley is very good where got in early on dry land; on clay it is late and backward. Nearly all is slightly stained with rain.

John Hodgson, Hibbert, Perth: Barley is going to be a better quality than last year; the dry weather will make it a short crop. There is not much housed yet.

John Campbell, Blanshard, Perth: Barley is a fair crop, but with very short straw. It is mostly cut but not secured, as most of it is now bound up, and takes long to dry out.

D. Macfarlane, Puslinch, Wellington: Barley is a very good crop. There will be some of it colored with the rain; some is secured in good order.

John Cornelius, East Garafraxa, Dufferin: Barley, owing to the drouth, is rather short in the straw Harvesting has not commenced yet.

Richard Blain, North Dumfries, Waterloo: Barley will be light in weight, but generally of good color. It is about all secured.

Robert Shearer, Niagara, Lincoln: Late sowing and the drouth afterwards will make the bulk small, but if there is favorable weather the sample will be good. All except late-sown fields are cut or ready to cut.

W. M. Calder, Glanford, Wentworth: Barley is short in straw, but the grain bids fair to reach an average crop; some has been cut.

John Campbell, Chinguacousy, Peel: Barley gives a good sample, but there is not as much of it as last year by thirty per cent., owing to the wet and cool spring.

Thomas Swinarton, Albion, Peel: Barley is a good average crop and saved in good condition; it is better than for many years.

R. M. VanNorman, North Gwillimbury, York: The growth is short, caused by dry weather, but will be nearly an average yield.

Simpson Rennie, Scarboro', York: Straw not very long, but the grain good. Cutting began about the 20th July.

J. D. Evans, Etobicoke, York: Barley is badly colored by the late rains; there is no other injury.

James Mackie, Uxbridge, Ontario: A first-class crop; a little colored by late rains, but not to hurt much.

John Foy, Scugog, Ontario: Fair to good; cutting commenced about the 22nd inst. The berry is colored by recent rains.

James Parr, Cartwright, Durham: A full crop. Considerable has been saved in fair condition; but not much will be No. 1 bright. All more or less damaged by recent rains.

Robert Colville, Clarke, Durham: Barley is a heavy crop and largely cultivated. From premature ripening, caused by the dry, warm weather, the berry inclines to be light, but bright. Cutting began about the 16th July.

James Brock, Cavan, Durham: There is a good deal of barley, but it is not a very heavy crop; the drought affected it. Late sown will have the plumpest berry.

George Kennedy, sr., Haldimand, Northumberland: Late barley is likely to be the best, as the early ripened too quickly.

George Sanderson, Cramahe, Northumberland: Not as good as last year; early barley was hurt by the dry spell and the late is rusted on wet ground.

David Allan, Seymour, Northumberland: Fair crop; not so good a yield as last year. Not much secured yet.

Edward Roblin, Ameliasburgh, Prince Edward: Very good; the drouth shrunk the early sown, but the late sown is good, both in color and quality.

E. A. Losee, Athol, Prince Edward: Under the average crop, as the dry weather cut it short.

C. R. Allison, South Fredericksburg, Lennox and Addington: Barley is not nearly so heavy a crop of straw as last year, though the grain is much heavier and brighter; average from 25 to 30 bushels per acre. A large part has been secured in good condition.

George Lett, Richmond, Lennox and Addington: Barley is barely an average crop, and is colored. Rain has interfered with harvest operations.

David Walker, Storrington, Frontenac: A medium crop; thin on the ground, but the grain is plump and good.

M. Spoor, Wolfe Island, Frontenac: Large acreage sown; appearances indicate an abundant crop.

John B. Wilson, Lansdowne Front, Leeds and Grenville: Barley is very poor; not more than half a crop. Drought was the cause.

Isaiah Wright, Augusta, Leeds and Grenville: Barley is a very good crop. More sown than usual, mostly for feeding.

A. Harkness, Matilda, Dundas: A medium crop; the summer was favorable, but a good deal of the grain was put in when the ground was wet and got a bad start.

D. B. McMillan, Lochiel, Glengarry: Not much grown in this township, but what there is looks well.
Wm. Ferguson, West Hawkesbury, Prescott: Barley I think will be about 25 bushels to the acre. In fact I never saw it look better.

R. Serson, Fitzroy, Carleton: One-third of the whole crop here seems to be barley, which is a heavy and good crop, free from rust. The ruination prices last year induced people to sow barley largely.

F. Kosmack, Admaston, Renfrew: Barley is not much cultivated yet, but is growing in favor as a substitute for the unsafe wheat.

Peter Clarke, Montague, Lanark: A good crop, rather above the average; it is just fit to cut.

Anson Latta, Thurlow, Hastings: Barley is one-quarter short in straw as compared with former years. The grain is a little shrunk and a large quantity discolored.

D. Kennedy, Otonabee, Peterborough: Barley is short in straw and some very light in weight. It will not turn out as well as last year.

F. Birdsall, Asphodel, Peterborough: Barley in most cases is very short and thin, caused by the drought. Most of it will be colored by the late showers. It is also light in the berry in many cases.

Wm. Ramsey, sr., Mariposa, Victoria: Barley is not over heavy, but the sample will be good if we do not get too much rain.

Amos Howkins, Eldon, Victoria: Not as heavy a crop of straw as last year, but a better and much plumper berry. If we are only lucky enough to get a few weeks of dry weather the quality will be, I think, a little above the average.

Sidney Barclay, Ops, Victoria: Barley is ripening rather unevenly. There is not much cut, and the weather is unfavorable.

F. R. Curry, Anson, Haliburton: Commenced cutting on July 30th, but some of it will not be fit for harvest for ten days yet. It looks very well indeed.

Wm. Hilton, Marmora, Hastings: Not a heavy crop, but the grain is a pretty good sample.

J. Early, Chaffey, Muskoka: Barley is a good crop everywhere in this locality.

OATS.

The oats crop of last season was a fairly successful one. Although the long drouth of June and July had an adverse effect, the average yield was still somewhat better than that of the previous year, while the quality of the grain was much superior. Over all the western counties the want of rain for weeks in early summer prevented the straw from attaining its usual length, and also to some extent hindered the stooling out process, so that the number of heads was kept down. As in the case of barley, however, rain came in time to secure a fair development of the heads, and, in the great bulk of the crop, a very fine quality of grain. The effects of the drouth were most severe on extremely heavy and extremely light soils, while late sown grain was injured much more than the early sown. Where sown on loamy soil in time to receive a good start from the spring moisture, the crop was very satisfactory, saving in the straw. The only exception to this state of affairs in the west was to be found in the Niagara peninsula and adjoining counties, where there was too much moisture in the spring. The counties of York, Simcoe and Ontario and some of both the East and West Midland groups produced very good crops of oats. In the extreme east, where oats are most largely grown, there was a promise in the earlier part of the season of an unusually good crop, but the heavy rains later on were somewhat injurious, causing too rank a growth and bringing on rust in many fields. The damage from rust was not extensive in any part of the west. The crop in the northern districts was well up to the average. A satisfactory feature of the season over the whole province was the almost entire absence of insect pests, only a few reports mentioning the wire-worm. The harvest season was a favorable one, and except in a few of the eastern counties and parts of the county of Simcoe, the sample was left uninjured by rain. The acreage under oats last year was much greater

than that of 1885, owing partly to the fall wheat failure, and the aggregate yield was about one-fifth greater. The results are thus shown:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	154,489	6,054,368	39.2	158,017	6,038,382	38.2
Lake Huron	169,422	6,178,239	36.5	163,309	6,148,832	37.7
Georgian Bay	155,153	5,456,633	35.2	134,615	4,438,871	33.0
West Midland	324,325	12,437,130	38.3	311,266	11,854,476	38.1
Lake Ontario	281,915	10,400,299	36.9	271,268	9,838,804	36.3
St. Lawrence and Ottawa	400,751	13,518,446	33.7	375,256	12,866,040	34.3
East Midland	118,716	4,070,223	34.3	113,260	3,550,311	31.3
Northern Districts	17,130	550,270	32.1	16,754	494,026	29.5
Totals	1,621,901	58,665,608	36.2	1,543,745	55,229,742	35.8

The total acreage and production were increased in all but the Lake Erie group.

FROM THE AUGUST REPORT.

W. G. Morse, Gosfield, Essex: Dry weather has made the straw short on sandy dry land; but they generally look well on low lands. They will not be fit to cut before this report is returned.

R. Waddell, Tilbury East, Kent: Straw for the most part is short, though the earing is good and gives promise of a fair crop, perhaps hardly an average. They are now coloring.

James Cruickshank, Zone, Kent: Oats are rather light on account of dry weather. We are beginning to harvest them.

Wm. Clarke, Aldboro', Elgin: A heavy crop; some are about ready to cut. Some little damage has been done by wire-worm, but nothing serious.

D. Campbell, Dunwich, Elgin: Oats on clay loamy soil are an excellent crop. On very stiff clay and light sandy soil the straw will be somewhat short, but all are heading well.

W. W. Wells, Woodhouse, Norfolk: The prospects are variable. Where sown early and on well manured soil the return will be 140 per cent. Later sown are not so good; but the general output will be 110.

Joseph Mumby, Walpole, Haldimand: Oats promise a first rate crop.

F. A. Nelles, Seneca, Haldimand: Not an average crop, but stood the dry weather better than some other crops.

F. A. Hutt, Stamford, Welland: Oats are somewhat affected by the drouth, but not to the same extent as the spring wheat and barley.

James Lovell, Brooke, Lambton: Oats will be rather a light crop; injured by drouth, and to some extent by frosts.

John Morrison, Plympton, Lambton: Oats are not so heavy as in the past two years. They are short in straw, bright in color, and the grain is likely to be of good quality.

N. Robson, Hullett, Huron: Oats are very good and promise an abundant crop; but some people are complaining of rust where the crop is late.

Walter Hick, Goderich, Huron: Oats look very well, but there is rather much smut. They seem to be filling up well, and early varieties are changing color.

Alex. McEwen, Hay, Huron: Oats promise well, but they are not so heavy in straw as last year. The best variety here is what we call the White Australian. They do not rust. The only objection to them is that they are late, and require early sowing.

M. McDonald, West Wawanosh, Huron: Oats are a great failure on account of the drouth. Only 2.63 inches of rain has fallen since the 28th May, and only 1.07 inches of that this month.

D. McNaughton, Bruce, Bruce: Late sown will be a light crop; early sown oats have a good appearance, but need a shower to fill the grain.

Peter Reid, Kinloss, Bruce: Short in the straw, and not so many sown as last year: the crop will be short.

Peter Clarke, Culross, Bruce: Oats not a quarter of a crop; very bad with smut.

George Buskin, Artemesia, Grey: Many fields are short, but they are stretching up; likely to be an average crop.

John Cameron, Holland, Grey: Oats are rather short in the straw owing to the dry summer, but late fields are doing very well now since the nice rains we had the latter end of July.

C. Julyan, jr., Sarawak, Grey: Oats are suffering from the drouth, and to all appearances will be a very poor crop. The harvest is not yet begun.

A. Stephen, Sullivan, Grey: Oats are in general a heavy crop. They look well all over the township.

George Cowan, Innisfil, Simcoe: Early oats are light; the later sown are better; there are some splendid fields. They are a big crop on flat and low lands especially.

George McLean, Oro, Simcoe: Oats have the appearance of a good crop. In some fields the tops are stuck over with a small insect which may yet do some harm, though it has not done a great deal so far.

W. W. Colwell, Essa, Simcoe: A good many oats were sown in consequence of the failure of fall wheat and seed barley being for a time scarce and dear. Oats are looking uncommonly well, and promise a full crop.

Richard Jolliffe, North Dorchester, Middlesex: Oats are a good crop; I saw some cutting to-day that I think will go sixty bushels to the acre.

R. A. Brown, West Nissouri, Middlesex: The straw is short, and the grain is getting ripe too soon. The berry is good so far. Very few are ready to cut yet. Only early varieties have done well, and will make the full average. Late fields will not make more than eighty per cent.

Wm. Black, Westminster, Middlesex: Oats, like barley, are very short in the straw, but the heads are well filled. There is a small quantity of straw, and a good yield of grain.

Wm. Brown, Blenheim, Oxford: Oats are badly burnt by dry weather; will yield about 25 bushels per acre.

James Anderson, East Zorra, Oxford: Oats are short in straw on account of drouth, but promise a good yield of fine quality. Some have been cut, but they are mostly quite green yet.

Thomas A. Good, Brantford, Brant: Oats are a fair crop on loose or loamy soil, but poor on clay. A great many fields are thin and short. There will not be nearly an average crop. There are hardly any cut, and some are not out in head yet. As far as I can judge they will not average 30 bushels to the acre.

Duncan McLaren, Hibbert, Perth: Dry weather has affected the oats; they are short in straw but well headed. They have been doing well since the last rain.

George Leversage, Fullarton, Perth: Oats, in consequence of dry weather, will be short and light. They are not ready to cut yet.

James Cross, Peel, Wellington: There will be a fair crop of oats if the weather continues favorable, but not so good as last year.

John McDonald, West Garafraxa, Wellington: Oats, where sown in good time, will be a fair crop but short in the straw; late sown are no use.

C. Masson, Eramosa, Wellington: A good crop, mostly of the white Chester kind, which grows very heavy and suits our land here.

G. Bailey, Melancthon, Dufferin; Oats look well, but the straw is short; they want rain.

Edward Halter, Waterloo, Waterloo: Early sown oats will average about 36 bushels to the acre, but the later grain is far back and shows rust on the leaves, which is a bad sign.

Peter Winger, Woolwich, Waterloo: Oats promises to give a full average crop. They will be ready to harvest in about two weeks.

Robert Shearer, Niagara, Lincoln: Oats were sown so late that they have only lately headed, but they have a good color and look better than might have been expected on light soils. On heavy clay the half of them never started at all.

George Walker, Clinton, Lincoln: Early sown oats are good. Some oats were sown so late that it is doubtful if they come to much; in fact they are not headed out yet.

W. M. Calder, Glanford, Wentworth: Oats will be deficient in straw, though those early sown give promise of a fair yield of grain. Late sown in some cases did not come up, owing to lack of moisture.

Wm. McDonald, Esquesing, Halton: Oats are generally light. Some early sown fields are nearly ripe, but most of the crop is just headed out. A good rain would greatly improve the crop.

Adam Alexander, Nassagaweya, Halton: The early sown will be good and are nearly ready to cut, but late oats will be light unless we get heavy showers soon.

Joseph McKay, Toronto, Peel: The oats will be a fair crop. The late rains have helped them along.

Archibald McKinnon, Caledon, Peel: Oats sown on heavy soil will be an over yield. I look for 45 bushels per acre on part of our farm.

George Evans, jr., Georgina, York: Oats are short, and scarcely an average crop from present appearances, but are filling well. No injury done by insects or storms. The cause of the crop being below the average, is the drouth only.

M. Jones, Whitchurch, York: The oat crop was never better at this time of year.

D. James, Markham, York: The crop generally is very short in the straw. Very few fields are as heavy as last year, yet we may have nearly as large a yield.

Joseph Wood, King, York: This crop on the whole is not as good as last year. On heavy clay lands—and if not injured by rust or storms—will be about ordinary.

R. S. Webster, Scott, Ontario: Oats are looking well now. They were slightly checked in growth by the drouth in June, but are making good progress at present. None will be ready for cutting before August 15.

Samuel Taylor, Mara, Ontario: Early oats look well. Those sown about May 24th have not so good a stand because of the drouth of June, but have been improving for the past ten days.

James Brock, Cavan, Durham: The oat crop, I think, looks best of any grain in this section.

James Parr, Cavan, Durham: Oats look exceedingly well and will be a full crop where sown on suitable ground. They are just shot out and are standing up well.

John Riddell, South Monaghan, Northumberland: Early sown oats are a light crop. The later give promise of a fair crop. Not ready for harvesting for ten or twelve days yet.

George Kennedy, sr., Haldimand, Northumberland: Oats are light. The drought took them before they were headed out, but they have recovered since the rain came.

Nelson Rose, North Marysburgh, Prince Edward: Oats are a splendid crop. Some fields were injured by the drought, but are recovering now.

Leonard Wager, Sheffield, Lennox and Addington: Oats are good, but all green yet. They were kept back by the drought in June.

John Sharp, Ernesttown, Lennox and Addington: Oats are not a heavy crop, but have been improving since the late rains.

Alex. Ritchie, Storrington, Frontenac: Oats are a good crop, but none have been harvested yet. The Austalian oats are the leading ones here, and are the best we have ever had.

Robert Anglin, Pittsburg, Frontenac: Early oats are very good, and I expect the late ones will be good also. No rust so far. Just commencing to cut the early ones.

John B. Wilson, Lansdowne Front, Leeds: Oats look well. The rain came just in time to save them. None ripe yet.

Thomas McDowell, South Gower, Grenville: Oats look well, especially on high lands. On low lands they are damaged a good deal by rust and wet.

G. C. Tracy, Williamsburg, Dundas: The fields are full of straw and appearances good.

G. D. Dixon, Matilda, Dundas: Good, with the exception of some pieces hurt by the wet.

Robert Vallance, Osnabruck, Stormont: Oats are a heavy crop; flattened a good deal by rain and wind.

D. B. McMillan, Lochiel, Glengarry: Oats look splendid. I never saw them looking much better. If well secured there will be a large crop.

A. M. Campbell, Kenyon, Glengarry: Oats, the main crop of this section, look well. They have been slightly injured by rust in some places. They are yet green.

James Cattanach, Lancaster, Glengarry: Oats are a fine crop, but are green as yet and show signs of rust in some places. To what extent they may be injured it is hard to tell.

Wm. Ferguson, West Hawkesbury, Prescott: Oats, from present appearances, should yield about 50 bushels to the acre. There is a great growth of straw.

Wm. McClintock, East Hawkesbury, Prescott: The prospect for oats is that there will be a very large yield for the quantity sown. Owing to the spring being so early, oats were sown earlier than usual, and are not likely to get rust.

Henry Armstrong, Clarence, Russell: Oats are one of the finest crops in this place. They have long straw, are well headed, and show altogether a very large growth.

Isaac Wilson, March, Carleton: Early oats more than an average, and late going to be too rank.

John O'Callaghan, North Gower, Carleton: Oats are good, but are down a good deal. Will be hard to harvest and are likely to rust.

J. J. Smyth, Gloucester, Carleton: A promising crop, but injured in some localities by wire-worm.

John Carter, Brougham, Renfrew: Oats never looked better than this year; but the cry raised all round is—how can we dispose of them at the prices?

J. M. Kennedy, Pembroke, Renfrew: Oats look well, but are badly lodged and tangled by hail and heavy rain.

H. A. Schultz, Sebastopol, Renfrew: Oats will be an immense crop, late sown will hardly ripen this year; the weather is too cool.

John Whelan, Brudenell, Renfrew: A splendid prospect of a heavy crop, but will be late harvesting. A considerable area sown.

John M. Cleland, Darling, Lanark: Oats are very good. No harvesting for at least two weeks.

Lawrence Dowdall, Drummond, Lanark: Oats look very well, but they will not be fit to cut sooner than the 15th August, as the oats here are in general a late kind. I wish we could get earlier varieties.

Patrick Corley, South Sherbrooke, Lanark: Oats look well. I think they will be a little over the average of the last three years.

Peter Clark, Montague, Lanark: Oats look well, but the straw looks rusty in wet lands. We have had a very wet season.

John Campbell, jr., Mariposa, Victoria: On the whole promising well, though much of the crop will be short in straw. None yet cut.

Nelson Heaslip, Bexley, Victoria: Oats promise to be a heavy crop, the best for ten years.

J. M. Drummond, Otonabee, Peterborough: Oats are very good, well headed, not overly long in straw, but a nice, even crop. None ripe.

James S. Cairnduff, Harvey, Peterborough: Oats, like spring wheat, are improving very much. The crop is short in spots, and will be a low average. Only occasionally a good even field is seen, chiefly on new ground.

Charles R. Stewart, Dysart, Haliburton: Wherever sown early they are splendid. Those sown late are not yet out of danger of drouth.

George Monro, Tyendinaga, Hastings: Oats will be a good crop—up to the average.

C. Robertson, Cardwell, Muskoka: Oats are patchy in some places, but not to a great extent. The straw is short on light land, but a very good head.

James McDonald, Stephenson, Muskoka: Very good. If we get through this month without frost they will be a splendid crop.

W. H. Green, Sinclair, Muskoka: Only about half a crop, on account of dry weather in May. They were not covered on new ground deep enough to sprout.

A. H. Smith, Monck, Muskoka: Oats range from extremely bad to very good. Late sown on light soil will not return seed.

W. D. White, Medora, Muskoka: Oats are looking splendid, except late sowing, which is short.

H. Armstrong, McKellar, Parry Sound: Oats are a good crop. The straw is not very luxuriant, but they will head and yield well.

Capt. D. Macfarlane, Foley, Parry Sound: Grain plump, straw medium; none will be cut till the middle of August.

J. H. Johnston, Sandfield, Algoma: Short but well headed; injured very much in places by the cut-worm.

A. McNabb, Thessalon, Algoma: Oats are short and thin for want of rain.

RYE.

The rye crop last year was a very small one in the aggregate. The grain has fallen very low in the estimation of farmers, and its acreage has been decreasing from year to year. The decrease last year was again a very marked one, amounting to about fifteen per cent. all over the province. Even in the east, where rye has hitherto taken fair rank with some of the other grains, there was a large falling off in its acreage. Many of the correspondents, who find it necessary to allude to the grain at all, do so with a measure of contempt. In a number of places rye is grown for pasture, and in others for the sake of the straw, which is in demand for packing and other purposes, but on the whole the growing of this grain is not a profitable business. The crop last year survived the winter thaws and frosts very well, escaping much better than fall wheat. Only a few instances were given of any of it being ploughed up. Wherever grown throughout the west the crop seems to have turned out fairly well, though hardly up to the average on account of the winter. In Norfolk, which was last year the heaviest producer of rye, it seems to have given a fairly satisfactory return. There the grain showed generally a fine sample, though the yield was somewhat shortened by the drouth. In some places in the east it appears to have been generally satisfactory both as to quality and yield; though a few of the returns are unfavorable, chiefly as regards quality. In some counties, particularly in Prince Edward, it was thin on the ground and rather poor in the head owing to the winter-killing. Only one report mentioned spring

rye, and that was from Haliburton, where it seems to have done fairly well. The following are the statistics of the crops of 1885 and 1886:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	8,905	137,841	15.5	10,980	185,425	16.9
Lake Huron	584	12,422	21.3	454	8,099	17.8
Georgian Bay	1,225	19,726	16.1	1,479	30,360	20.5
West Midland	2,582	51,358	19.9	3,435	51,907	15.1
Lake Ontario	21,874	317,094	14.5	21,065	319,779	15.2
St. Lawrence and Ottawa	18,173	333,404	18.3	25,520	446,629	17.5
East Midland	13,776	222,000	16.1	14,778	219,677	14.9
Northern Districts	660	12,617	19.1	582	9,630	16.2
Totals	67,779	1,106,462	16.3	78,293	1,271,506	16.2

FROM THE AUGUST REPORT.

E. M. Crysler, Charlotteville, Norfolk: A very good crop, although it was injured some by May frosts after it was in head. The heads did not fill so well as they would have done with no frost.

A. N. Simmons, Middleton, Norfolk: Like wheat, rye suffered some from winter-killing. At this date it is mostly harvested, and will yield nearly an average crop.

Joseph Martindale, Oneida, Haldimand: Rye is below the average, having been winter-killed.

J. R. Martin, North Cayuga, Haldimand: Very little grown, but good. It is now safely housed in good order.

F. A. Hutt, Stamford, Welland: Light in quantity, good in quality but not extensively sown.

A. A. Meyers, Sombra, Lambton: Rye is rather a light crop. The winter seems to have affected it somewhat, causing a rather light bottom.

John Craig, Amabel, Bruce: None grown just here. Over on the Lake Huron Shore, on the sandy soil, where it is grown considerably, it has done well.

Thomas Kells, Artemesia, Grey: Very little of this crop cultivated; I know of just one field, which looks well.

Basil R. Rowe, Orillia, Simcoe: None grown except on very light land. It was partially winter-killed, but not to the same extent as fall wheat.

James Anderson, East Zorra, Oxford: Very little grown, but a good crop, and all secured in fine order.

D. Macfarlane, Puslinch, Wellington: Rye is a good crop, but not much grown in this township.

Peter Winger, Woolwich, Waterloo: Rye is all harvested, and is a good crop.

Daniel McLaren, Nelson, Halton: Rye wintered better than wheat; will be about three-fourths of a crop.

Adam Alexander, Nassagaweya, Halton: We are getting sick of rye. It is nearly as bad as red root to get out of the ground.

R. S. Webster, Scott, Ontario: Very little rye is grown, but what I have seen promises very well.

Wm. Windatt, Darlington, Durham: Rye is a good crop; it was ready to cut by the 20th July.

Robert Hodge, sr., Clarke, Durham: The rye crop has been good, and was cut in good order; it promises well.

Walter Riddell, Hamilton, Northumberland: An average crop. It is being harvested in good condition.

James Benson, Ameliasburgh, Prince Edward: Rye came through the winter well, but is thin on the ground. It will probably be two-thirds of a crop.

Nelson Rose, North Marysburgh, Prince Edward: A poor crop, thin on the ground, heads fairly filled. Harvesting commenced July 19th.

J. B. Aylesworth, Camden East, Lennox: Rye is an average crop, and secured in good condition. Cutting began about the 16th July.

John Donnelly, Portland, Frontenac: Rye is a fair crop, and is harvested in good condition.

John McGuire, North Crosby, Leeds: Considerably winter-killed. Some was ploughed up, but what remains is very good, and saved in good condition.

James Sieveright, Gloucester, Carleton: A heavy crop where the ground was properly prepared.

T. M. Robertson, Nepean, Carleton: Rye is an average crop and is saved in fair condition.

Andrew Wilson, Ramsay, Lanark: Rye was thin from winter-killing. The grain is plump.

Daniel Williams, Glamorgan, Haliburton: Fall rye is very good, and ready for harvesting. Spring rye also promises well.

PEASE.

Over the whole of the western peninsula there was a remarkable uniformity in the character and even in the language of the returns as to last year's pease crop. "Very good; no bugs," was the succinct description of the crop given by scores of correspondents, with the remark occasionally added that the straw was shortened by the drouth, though it did not appreciably impair the yield, or that late sown fields suffered from mildew. From nearly the whole of western Ontario the bug, the old time enemy of the pea crop, seems to have vanished. Less than half-a-dozen correspondents out of about four hundred mentioned that it was present, while its absence was made the subject of pretty general and not unnatural rejoicing by the farming community, whom it had well nigh driven to abandon the culture of this valuable legume. In many of the counties lying east of York and Simcoe the reports were not so uniformly favorable, but "fair to middling" would perhaps sum up correctly the condition of the crop in even those counties from which came the most unfavorable reports. In the eastern counties as well as in the western the presence of the bug was very rarely noted, but mildew appeared to have been more generally prevalent, especially in late sown pease. Taking the province as a whole, however, the pease crop of 1886 was a large one and the sample unusually good. The annexed table gives the results of the crop for the two years past:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	71,755	1,588,950	22.1	60,287	1,228,813	20.4
Lake Huron	86,412	2,072,339	24.0	76,470	1,892,638	24.8
Georgian Bay	80,811	1,875,540	23.2	74,826	1,629,321	21.8
West Midland	141,349	3,483,392	24.6	131,300	3,124,527	23.8
Lake Ontario	160,444	3,655,754	22.8	143,516	3,044,397	21.2
St. Lawrence and Ottawa	99,645	1,976,831	19.8	101,723	1,947,918	19.1
East Midland	56,033	1,238,273	22.1	50,507	974,961	19.3
Northern Districts	7,487	152,655	20.4	7,452	163,617	22.0
Totals	703,936	16,043,734	22.8	646,081	14,006,192	21.7

The satisfactory returns from last year's crop of pease naturally causes a considerable revulsion of feeling among the farmers in their favor, and a further increase of acreage will no doubt be the result this season.

FROM THE AUGUST REPORT.

John Hooker, Mersea, Essex: There are few pease sown on account of the bug in past years, but what are sown look well and promise a good crop.

Daniel Stewart, Tilbury West, Essex: Early sown are good and not injured by the bug as far as I can learn. Late sown are suffering from the drouth.

John Wright, Dover, Kent: Pease are generally good, although dry. The early sown are filling well, and are a good, clean crop; but in this locality are injured by the pea bug.

John Bishop, Orford, Kent: Some pease are ready to cut and some are only in blossom. It appears that the bugs have left entirely.

J. Robinson, Southwold, Elgin: Pease are looking well. People are beginning to sow them more liberally than formerly.

John Machon, Charlotteville, Norfolk: Quite a large quantity sown this year. I think farmers are increasing the pea crop.

R. Jepson, Walpole, Haldimand: Early pease will be a fair crop. There was too much dry weather in the early part of the season for the late pease.

J. R. Martin, North Cayuga, Haldimand: Pease are doing well and promise a good crop. Late sown are thin yet, but are catching up. In wet places they were drowned out.

James McClive, Bertie, Welland: Pease are a good crop, with no bugs. They are coming into general favor.

D. Schooley, Bertie, Welland: Pease are good, but full of bugs.

J. H. Patterson, Dawn, Lambton: Pease are a fair crop for this season; but the yield will be somewhat shortened by the vines ripening prematurely by the dry weather.

John Morrison, Plympton, Lambton: Pease are a good average crop, and there is a good breadth sown. The absence of the bug in the past two years has encouraged the farmers to turn to this crop again.

John Hislop, Grey, Huron: Pease look well, but are ripening too fast. The grain will be very small.

G. E. Cresswell, Tuckersmith, Huron: Pease are a magnificent crop and no injury done by bug or other cause. Only a few patches of early pease have been cut and hauled in. The great bulk of the crop is yet untouched.

James Johnston, Carrick, Bruce: Pease look well all over, but in some fields the blossoms dropped off on account of drouth. There will be plenty of straw, but the pods are small.

Lewis Lamb, Greenock, Bruce: Looked well at one time, but do not appear to be podding well, owing to continued dry weather.

Josiah Gamey, Osprey, Grey: Pease have held a good color, notwithstanding the lack of rains, and promise a fair crop.

J. M. Rogers, Sydenham, Grey: Pease will be a good crop, and have received no injury, except a few fields injured by mildew.

John Mackenzie, Sarawak, Grey: Dry weather prevented filling properly, and the crop generally will not be up to the usual standard. The straw is long, owing to good showers in spring, which gave them a start to cover the ground.

George Cowan, Innisfil, Simcoe: Early pease are poor, owing to dry weather. Later fields have a good crop, with plenty of straw and grain.

James Robertson, Flos, Simcoe: Pease are very heavy and there is a wide acreage, as some sowed pease on ploughed-up fall wheat ground.

J. A. Glen, Westminster, Middlesex: Pease are going to be a first class crop; plenty of vines and no water-killing on flat lands.

J. Grimason, Caradoc, Middlesex: This crop suffered very much from the dry weather. Those very early and very late sown are the worst. Some patches are pretty well loaded, but the rain did not come soon enough to benefit them much.

Wm. Watcher, North Dorchester, Middlesex: Pease are a splendid crop, well filled, bright in straw and thickly podded.

James Anderson, East Zorra, Oxford: Pease suffered more from drouth than any other crop. They are very short in straw. There are no signs of weevil. They are in all stages, from ripe to quite green.

F. Malcolm, Blandford, Oxford: Pease will be an average crop. Although early sown they suffered from drouth, but on the whole are a good crop. No bugs.

Thos. A. Good, Brantford, Brant: Pease promise a fair crop, but were hurt a little by early rain, and then by dry weather. I have estimated the average at 20 bushels per acre.

Thos. Lunn, Oakland, Brant: No bugs for the past two years, and the present crop is very promising. The fields are white with blossom, and the chances are for a better crop than for many years.

D. McLean, Ellice, Perth: Pease are a good crop where sown on sod, and pretty fair on stubble land. Will be ready to pull in about ten days.

Thos. Steele, Downie, Perth: A heavy crop. They are ripening too fast. The weather is too warm and dry.

W. D. Wood, Eramosa, Wellington: Pease are long and rank in straw and podding well. If the weather does not continue too dry they will be a good crop.

John Strang, West Garafraxa, Wellington: Pease are short, but will be well loaded. Cutting will be general about the 15th August.

W. Whitelaw, Guelph, Wellington: Pease will be good on clay soil, but very light on light and gravelly soil.

George Bellinger, Wellesley, Waterloo: Pease are first class; no injury whatever, but are not ready to be harvested.

Thos. Mitchell, North Dumfries, Waterloo: Pease are very unequal. Some are very good, and some were cut green for fodder, on account of the drouth.

Robt. Shearer, Niagara, Lincoln: Pease sown early look very well. The late sown are only a few inches high, quite a number of fields having been sown about the end of June.

W. M. Calder, Glanford, Wentworth: Pease that were not too late sown are a good crop. Some late sown did not grow, on account of the drouth.

Colin Cameron, Nassagaweya, Halton: Plenty of straw, but the hot sun in the beginning of July injured the blossoms of the early crop. The grain is small and the pods are scarce and short in many places.

Joseph Sleightholm, Toronto Gore, Peel: Pease are very good, well podded, and the straw of medium length. They will be ready to pull in about a week.

John Campbell, Chinguacousy, Peel: I have not seen pease look better for several years. They have good straw and are well podded.

Wm. H. Proctor, King, York: The very early pease are not so good, as the weather was too hot and dry when they were in blossom. The later pease are filling well and promising a good crop.

Dr. F. C. Sibbald, Georgina, York: Those which bloomed early filled badly. The rain of the 14th July saved the later crop.

D. James, Markham, York: The pea crop is extra heavy this season. The vines of some varieties are very long. The crop is keeping the weeds down very well, and the land will be in good order for sowing fall wheat.

R. S. Webster, Scott, Ontario: Early sown pease suffered from drouth in June. The rains since the middle of July have started new growth and fresh blooms, which threatens to result in mildew. Medium late sowing promises better.

Robt. Moment, Clarke, Durham: There was a large quantity of pease sown. They have every appearance of a very large yield, nothing appearing to hurt them as yet. Some fields will soon be ready to harvest.

David Allan, Seymour, Northumberland: Early sown are a light crop and yield: the later grain is much improved by the rains.

Edward Roblin, Ameliasburgh, Prince Edward: Pease are good. There are few bugs. The Early Kent variety is extra good. There is a greater acreage of pease this year than for many years.

E. A. Losee, Athol, Prince Edward: Pease are a good crop, and will bring more money than any other kind for the same number of acres.

John Sharp, Ernesttown, Lennox and Addington: Pease bid fair to be a middling crop. Some that were in blossom during the drouth were affected both in straw and podding.

C. R. Allison, South Fredericksburg, Lennox and Addington: Pease have not looked so well for years, and there was a larger breadth sown last spring than there has been for years.

Joshua Knight, Storrington, Frontenac: Pease are the best crop we have had for years; in fact, the best grain crop of the season.

James Collison, Matilda, Dundas: Pease grew too much to vine, and do not seem to ripen as they ought.

James Cattanach, Lancaster, Glengarry: Pease have a fine appearance where they were not damaged by rain. There is mildew in some places.

Wm. McClintock, East Hawkesbury, Prescott: Some are complaining that pease are too rank, and if heavy showers come they will be down and mildew.

Henry Armstrong, Clarence, Russell: Pease are a fine crop. They are only beginning to load. They have a promising appearance.

Wm. Doyle, Osgoode, Carleton: The pea crop is the best for many years. I believe that if they get no drawback they will average 40 bushels per acre.

Isaac Wilson, March, Carleton: Pease on high land are very good and well loaded, but on low land the mildew is very bad.

Joseph Kinder, Brudenell, Renfrew: Pease are too heavy in straw, but likely to yield well if dry weather comes soon. We have had a long spell of showery weather.

John Carter, Brougham, Renfrew: Pease are a good crop, but in most low lands are becoming mildewed

Peter Clark, Montague, Lanark: Heavy straw and well podded, but threatened with mildew.

A. F. Stewart, Beckwith, Lanark: Not up to the average. Early pease were hurt by the dry weather, and some of the late are mildewed.

Thomas Smithson, Fenelon, Victoria: Early sown are light in straw and yield of grain. Late sown are very promising.

F. Birdsall, Asphodel, Peterborough: The earliest are not so well filled, but the late promise a fair crop. I commenced to cut my pease (Marrowfat) on the 27th July.

Chas. R. Stewart, Dysart, Haliburton: Pease look very well. My pease are all well podded and will be a fine crop. This district always succeeds with pease.

George Monro, Tyendinaga, Hastings: I must say pease are as fine a crop as I have seen for years.

J. Early, Chaffey, Muskoka: We never had better. There is no maggot yet to be seen. The prospect is good for a splendid crop.

H. Armstrong, McKellar, Parry Sound: Considerable sown and promising well.

J. H. Johnston, Sandfield, Algoma: The prospect of a heavy crop has been injured to a small extent by the cut-worm.

FROM THE NOVEMBER REPORT.

Edmund B. Harrison, Howard, Kent: Quality good; yield small. Drouth ripened the pease prematurely and the rain produced a second growth.

Geo. A. Marlatt, Bayham, Elgin: The best crop of pease that has been grown here for many years.

James Morrison, Walsingham, Norfolk: Pease a good crop, except late sown, which were injured by mildew.

Wm. Chalmers, Sherbrooke, Haldimand: Pease very good and free of bugs.

Jno. R. Smith, Plympton, Lambton: Pease good—no bug. Farmers are now paying more attention to this valuable crop, which pays well.

R. Fleck, Moore, Lambton: Fine crop; bug appears to have left us.

Walter Hick, Goderich, Huron: Pease very good—not a bug to be seen.

Jno. Anderson, East Wawanosh, Huron: Pease good, and yield to the acre best of any crop this year.

Hugh Murray, Bruce, Bruce: Pease a good crop, but much injured by a hail storm.

Malcolm Cameron, Bentinck, Grey: Pease splendid crop—no bug.

Basil R. Rowe, Orillia, Simcoe: Pease harvested early, very good; the late ones injured by rain—not marketable.

C. A. O'Malley, Mosa, Middlesex: The pea bug has disappeared. I had 30 acres of pease, most of which I personally handled, in field, threshing, marketing and feeding, yet I have not seen a pea bug this season. Threshers report the same.

Robt. Leake, East Oxford, Oxford: The best sample we have had in ten years.

Daniel Burt, South Dumfries, Brant: Good crop, fine quality and largely cultivated.

Geo. Leversage, Fullarton, Perth: Pease an unusually good crop; don't know that I ever knew them so uniformly good.

Chas. Masson, Eramosa, Wellington: Sample good; no bug, no worm.

Wm. McKay, Toronto, Peel: Early, good; late ones took a second growth after the rains in harvest, which hurt the sample.

James H. Newlove, Albion, Peel: Pease good; no injury by rain, rust or insects.

James Leask, Scott, Ontario: When early sown, good; others mildewed

Jno. Williams, Hamilton, Northumberland: Only middling, being rather small from the drouth in filling time. Pease suffered most from the dry weather.

Louis P. Hubbs, Hillier, Prince Edward: Every kind a fine sample. All buyers admit we raise a superior sample of pease in this county.

John Elkington, M.D., Palmerston and Canonto, Frontenac: The few farmers who have threshed pease by hand for immediate hog feed report that although the straw was most luxuriant, yet the yield is below the promise.

Isaiah Wright, Augusta, Grenville: Only a middling crop; a little too wet and cool.

James Clark, Kenyon, Glengarry: Pease good on clay soils, but mildewed on light soils.

Isaac Wilson, March, Carleton: Early pease, good; late, too rank and badly mildewed.

H. A. Schultz, Sebastopol, Renfrew: Quality good with some farmers, but with others they were badly damaged by mildew.

J. A. Jackson, Eldon, Victoria: Pease generally good excepting late sowing, which in some varieties were mildewed.

James S. Cairnduff, Harvey, Peterboro': Quality very good and yielded well.

W. C. Melville, Stanhope, Haliburton: A good crop—the best for years.

J. C. Hanley, Tyendinaga, Hastings: Sound and free from insects, but light in many places.

Chas. Robertson, Cardwell, Muskoka: Pease very good; no bug; the best sample to be seen.

Capt. D. Macfarlane, Foley, Parry Sound: Straw too long; some nearly twelve feet; yield 30 bushel to the acre.

INDIAN CORN.

The early part of the season was very unfavorable for the growth of corn. Wet and cold weather at planting, with cool nights and the long drouth later on, seriously retarded its progress. Towards ripening time there was a great change for the better, and the crop was enabled to regain very rapidly the ground it had lost during the summer. In what may be aptly termed the corn belt—viz.: that portion of the province lying south of a line drawn from the southern extremity of Lake Huron to the western

extremity of Lake Ontario, or from Sarnia to Hamilton—this favorable weather brought in a fair average crop, while a few correspondents spoke of exceptionally good fields. In the Lake Huron and West Midland counties, with the exception of Oxford, the severe frost about the middle of July did considerable damage, especially on low moist land. It was generally remarked in the November reports that the ripening was more perfect and uniform than usual. Some damage was done to corn in shock by the great wind storm of October 14th. In the Lake Ontario and River St. Lawrence counties, where this crop is tried to some extent, there was fair success. Frost came later than usual, and a large proportion of the ears hardened well. The table annexed gives the acreage and product:

Districts.	1886.			1885.		
	Acres.	Bushels. (in ear.)	Bush. per acre.	Acres.	Bushels. (in ear.)	Bush. per acre.
Lake Erie	90,273	6,684,210	74.0	91,694	6,378,006	69.6
Lake Huron	7,210	484,510	67.2	8,131	550,362	67.7
Georgian Bay	1,134	66,133	58.3	895	47,220	52.8
West Midland	22,048	1,497,890	67.9	21,983	1,483,309	67.5
Lake Ontario	19,417	1,144,185	58.9	23,875	1,264,923	53.0
St. Lawrence and Ottawa	12,181	701,740	57.6	15,692	796,831	50.8
East Midland	4,029	218,341	54.2	5,281	209,710	39.7
Northern Districts	202	8,300	41.1	280	11,030	39.4
Totals	156,494	10,805,309	69.0	167,831	10,741,391	64.0

Though the acreage was decreased by nearly 10,000 acres, the aggregate product was a little greater than in 1885.

FROM THE AUGUST REPORT.

Daniel Stewart, Tilbury W., Essex: The crop is going to be short; a great deal of it had to be re-planted, causing it to be late, and the drouth is retarding it now. Unless we have a late fall, without early frosts, it will be short.

William Millen, Gosfield, Essex: Promises to be a good crop; looks well and is quite forward; is just earing nicely. But if present drouth continues will not do so well.

R. H. Waddell, Tilbury E., Kent: Owing in part to bad seed and in part to wet and cold weather subsequent to planting, many fields of corn have been re-planted. Where the first planting grew the crop is good; the second does not promise much; too dry.

James Davidson, Yarmouth, Elgin: The season has been favorable so far, and with a continuance of good weather we may look for a good crop.

James Morrison, Walsingham, Norfolk: Corn looks splendid except on wet land where the seed got killed out.

James McClive, Bertie, Welland: Corn is not a success on account of land being wet and cold in planting season, and of late, weather too dry.

James Thompson, Warwick, Lambton: Corn in many places has been killed by frost in July, but I think it will be an average crop yet.

J. H. Patterson, Dawn, Lambton: A fair stand has been secured in many fields, but the plants are stubby and short, and much of the crop is tasselling out, although only about two feet tall. Rain and a warm fall may make it yield from one-half to three-fourths of an average crop.

John Varcoe, Colborne, Huron: Very little grown this year, and what there is does not look well. The weather has been too cold at nights, and it has also been too dry for the corn crop.

S. P. Zavitz, Lobo, Middlesex: Corn crop will be light—thinned out by birds or failed to come up on account of poor seed. Slightly injured by frost on July 11th on low ground.

Thomas Lunn, Oakland, Brant: Poor seed caused a good deal of trouble, some planting too or three times, and finally giving it up. Those fortunate enough to secure good seed will secure a good crop several days earlier than former years.

John Campbell, Blanshard, Perth: Not much planted here. The severe frost of July 13th ruined the prospects.

Benjamin Devitt, Waterloo, Waterloo: Not much grown and backward; weather too cool in beginning of season and very dry now. It will be a short crop.

Edward Irvine, Grimsby S., Lincoln: The wet spring injured the prospects, and it will be a poor crop as a rule.

W. M. Calder, Glanford, Wentworth: Have not noticed much corn this season. Some that I have seen is pretty good and some very poor. It is not raised very extensively here.

Walter Riddell, Hamilton, Northumberland: Some had to be ploughed up from bad seed. The crop is is unequal; some looks fairly well. Much depends on the weather for the next two months. It is rather late.

James Benson, Ameliasburgh, Prince Edward: Corn a failure, owing to the seed being of an inferior quality or from some other reason. But there are a few exceptional cases which give promise of a fair crop.

John Sharp, Ernesttown, Lennox and Addington: The corn crop is not very good; seed rather poor and the fore part of the season rather cold.

Archibald Knight, Kingston, Frontenac: Will be a small crop on account of bad seed. Where the seed was good the crop will be fair.

Wm. Kyle, Williamsburgh, Dundas: Not very promising. Weather too wet and cold; very wet and cool June and July.

Lawrence Dowdall, Drummond, Lanark: It was a very poor year for corn. A great quantity of it did not come up at all, the spring was so cold.

George Monro, Tyendinaga, Hastings: Not very good. The weather was too dry about the 24th of May. I have corn that was three weeks in the ground before it came up.

FROM THE NOVEMBER REPORT.

John Buckland, Gosfield, Essex: Corn is not a large crop, but is sound and good.

Alex. Young, Harwich, Kent: There are some fine fields of corn, well ripened, while others were hurt by the drouth. The yellow variety is the best.

Sheldon Ward, Malahide, Elgin: Early planted corn is good; late planted has the ears short and not filled out at the end. Dry weather is supposed to have been the cause of the damage.

E. M. Crysler, Charlotteville, Norfolk: Corn was in good condition at harvesting. The storm of the 13th October blew a great deal of it down, and much of it is not set up yet.

Wm. Chalmers, Sherbrooke, Haldimand: Corn is good, but the ears are somewhat shorter than common, owing to the dry season. The damage would probably amount to fifteen per cent.

John A. Law, Stamford, Welland: The condition of corn is good, but the early drouth hurt it very much, especially on clay or mucky soil. There is not half a crop on these, but with me there is a splendid crop on sandy soil, exceeding one hundred bushels per acre.

Silas Mills, Moore, Lambton: Corn is good. It was hurt by the cool summer and the drouth, but favorable weather shortly before the crop was ripe materially improved it.

Walter Hick, Goderich, Huron: Corn is grown to a limited extent here, and did well. I had a lot of western corn, or horsetooth dent, that ripened perfectly.

Wm. Jamieson, Westminster, Middlesex: Corn was kept back in the early part of the season by continued cold nights; hence the yield in general will be only average. It was pretty well handled before frost struck it.

James Anderson, East Zorra, Oxford: A good many soft ears, but on the whole a fair crop. Not a great deal grown.

Thomas Lunn, Oakland, Brant: This fall has been very favorable for the ripening of corn and other late crops. The frost kept off so long that even Stowel's evergreen corn has ripened this year, a thing that has not happened for several years.

James Stull, Grantham, Lincoln: Corn that came up well was a good crop.

Erland Lee, Saltfleet, Wentworth: Corn is only a medium crop. There was not much planted owing to the wet spring. Drouth did not affect it much, and it was well ripened and cut before frost came.

Louis P. Hubbs, Hillier, Prince Edward: Corn is a splendid crop; nearly all got hard.

BEANS.

Beans are not extensively grown as a field crop except in the county of Kent and portions of Elgin, Brant and Norfolk. In some of the Ottawa river counties and in Hastings they are cultivated to a small extent to supply the demands of the lumber shanties, and occasional small patches are grown in other parts of the province for the seedsmen or for local consumption. In Kent and the adjoining districts beans were last year a

fairly successful crop, though kept back to some extent by the severe drouth. The sample was fair, the crop being harvested in good condition. In the Ottawa valley beans suffered in some measure from the excessive rainfall, but were still fairly up to the average. The acreage and product for the past two years were as follows:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	14,299	319,744	22.4	17,466	332,617	19.0
Lake Huron	703	14,663	20.9	677	14,923	22.0
Georgian Bay	202	4,826	23.9	236	4,045	17.1
West Midland	743	15,729	21.2	976	18,623	19.1
Lake Ontario	1,906	44,011	23.1	1,637	35,570	21.7
St. Lawrence and Ottawa	2,762	71,476	25.9	3,006	78,561	26.1
East Midland	414	10,358	25.0	593	10,550	17.8
Northern Districts	43	1,265	29.4	60	1,675	27.9
Totals	21,072	482,072	22.9	24,651	496,564	20.1

FROM THE AUGUST REPORT.

John Wright, Dover, Kent: Beans have been affected by drouth in the northern part of the county, but where they were planted early they are doing well.

F. B. Stewart, Raleigh, Kent: Splendid appearance; seem to stand drouth better than anything else.

Geo. Green, Chatham, Kent: Where the crop was not affected by the frost of July 2nd and 13th it looks well, and they are in full blow. The late planting suffered from drouth and frost.

Robert Cummings, Harwich, Kent: Most of the beans on clay soils did not germinate for two or three weeks after planting, and are looking very poorly. Those on loam germinated at once and are looking very well, though they, too, need rain. On the whole, as the bean district is pretty evenly divided, there may be three-fourths of a crop, giving to loam soil a full crop and to the clay half a crop. Under very favorable circumstances this will be the best they will do. Acreage somewhat less than in 1885.

Jas. McKnight, Windham, Norfolk: Looking very well. Will be good if the drouth does not continue too long.

Wm. Selkirk, Petewawa, Renfrew: Good appearance for a crop if not frozen before ripening.

FROM THE NOVEMBER REPORT.

Alex. Young, Harwich, Kent: Beans show a good bright sample, and need no picking.

John Wright, Dover, Kent: Beans are a very irregular crop, some being prime and a great deal worth nothing.

Lewis Simpson, South Dorchester, Elgin: Beans are generally good, and harvested in good order.

Wm. W. Wells, Woodhouse, Norfolk: Beans, so far as heard from, are a middling crop.

P. R. McDonald, Osgoode, Carleton: There was too much wet for beans.

Geo. Sparling, Stafford, Renfrew: Beans are good, but they are not grown here in large fields.

SORGHUM.

Sorghum was never very extensively cultivated in Ontario, and at present it seems to be steadily declining in favor, owing chiefly to the comparative failure of the crop for the last few years. Last year's crop was sufficiently doubtful in its product to justify the anticipation of a still further decline in the small acreage now sown. Though some farmers in Essex and Kent reported a yield varying from fair to good, many growers

complained that the crop was injured at an early stage by frost and cold, chilly nights, and that the summer was too dry and cool for the proper development of the cane. The reports from those portions of Norfolk in which it is cultivated were more favorable. The quantity grown elsewhere in the province is so small that it is scarcely mentioned by correspondents.

FROM THE NOVEMBER REPORT.

John Warnock, Tilbury West, Essex: Sorghum is a fair crop where it was well attended to.

Reuben Taylor, Tilbury West, Essex: Sorghum fair; less raised than two years ago.

Alex. Young, Harwich, Kent: Sorghum poor; too dry and cool.

Dugald Campbell, Dunwich, Elgin: Not so good as last year, cold chilly nights for a time, and then the dry hot summer dwarfed it.

John Meharg, Houghton, Norfolk: Sorghum was got in and cured in good condition.

BUCKWHEAT.

The season was a favorable one for buckwheat in that portion of the province where it is most largely grown, namely, the eastern and north-eastern counties. In a few cases frost nipped the later fields, but the yield was generally very good and the grain was saved in good condition. In the Lake Erie counties the crop was severely damaged by the drouth, being in some places a complete failure. A few reports also mentioned injury by rain at harvest time. As will be seen from the table below, the acreage was some what greater and the average yield less than in 1885:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	10,768	224,024	20.8	10,136	228,284	22.5
Lake Huron	1,431	23,096	16.1	1,021	21,678	21.2
Georgian Bay	996	18,510	18.6	598	11,960	20.0
West Midland	2,571	55,107	21.4	2,336	49,325	21.1
Lake Ontario	19,395	432,258	22.3	13,981	343,057	24.5
St. Lawrence and Ottawa	28,989	757,088	26.1	28,015	746,782	26.7
East Midland	6,321	159,109	25.2	5,131	117,804	23.0
Northern Districts	321	9,516	29.6	558	11,785	21.1
Totals	70,792	1,678,708	23.7	61,776	1,530,675	24.8

FROM THE NOVEMBER REPORT.

Dugald Campbell, Dunwich, Elgin: Buckwheat is not much grown. What little was grown was injured by excessive heat when in bloom.

Robert Watson, Windham, Norfolk: The weather was very dry, and the buckwheat was late coming up; but as there have been but two light frosts all ripened well.

L. Buckton, Crowland, Welland: Buckwheat did not come to anything. It was mostly ploughed under and the ground sown with wheat.

George Sanderson, Cramahe, Northumberland: Buckwheat is a light crop. Some late fields were injured by frost.

George N. Rose, North Marysburgh, Prince Edward: Buckwheat was hurt by the drouth in its early stages, but was ripe before the frost came.

P. W. Miller, Kaladar, Addington: Buckwheat is generally better than last year. Some pieces suffered from drouth.

W. Y. Newman, Oxford, Grenville: Buckwheat is excellent. The season has been very favorable.

Peter Guthrie, Darling, Lanark: Buckwheat is a splendid crop and harvested in good order.

J. C. Hanley, Tyendinaga, Hastings: Buckwheat is good where not killed by frost.

Anson Latta, Thurlow, Hastings: Late sown buckwheat yields amazingly; early was very poor.

HAY AND CLOVER.

The crop of hay and clover last year fell considerably below the average, being lighter, in fact, than for some years before. The average yield all over the province was about one and one-third tons to the acre. The principal cause of the shortage was the severe drouth that prevailed in May and June, but this was aided very much by frosts both in winter and spring. Over the greater portion of the western counties, and especially in the south-west, the clover suffered a good deal in the winter, one Essex correspondent mentioning the fact that in meadows of one year's seeding the plants were heaved by the frost—a very unusual circumstance. In the extreme east, again, winter-killing was frequently complained of, many of the older timothy meadows having been ruined by exposure to frost and by the formation of ice in low places. In Simcoe and the Lake Ontario counties there was also considerable injury from this source, but not so great as in other districts. With the summer came drouth, and in consequence the plants that the winter had spared were stunted to a greater or less extent. Cold weather in May, culminating in frost in most of the counties, further retarded growth, so that only a limited time was left for the crop to make up its deficiency. This it did to a greater extent than most of the farmers at one time anticipated, and on the whole they seemed to be fairly satisfied with the season's results. The great bulk of the hay crop was saved in very fine condition. All over the west there was scarcely a shower worthy of notice during haying time, and the crop thus in some measure made up in quality for what it lacked in quantity. In the central portion of the province there was a rainy week about the middle of July, which damaged a part of the hay, but by far the greater portion was gathered in fine condition. In the most easterly counties rain caused some damage. A large number of the correspondents, covering nearly the whole area of the province, mentioned the presence of the joint-worm in the grasses, especially timothy and spear-grass, but its ravages were not very serious. The acreage and product were as follows:

Districts.	1886.			1885.		
	Acres.	Tons.	Tons per Acre.	Acres.	Tons.	Tons per Acre.
Lake Erie	272,538	367,133	1.35	280,932	440,979	1.57
Lake Huron	231,549	275,168	1.19	227,501	334,176	1.47
Georgian Bay	186,024	202,581	1.09	190,593	216,109	1.13
West Midland	407,952	550,027	1.35	412,287	656,882	1.59
Lake Ontario	427,618	588,124	1.38	417,086	618,958	1.48
St. Lawrence and Ottawa	569,028	789,637	1.39	542,888	749,969	1.38
East Midland	160,297	185,052	1.15	156,080	189,908	1.22
Northern Districts	40,145	36,724	.91	40,724	45,174	1.11
Totals	2,295,151	2,994,446	1.35	2,268,091	3,252,155	1.43

Clover Seed.—Though the midge did not prove so generally destructive to the seed clover last year as in 1885, yet its ravages were so serious in many places that, combined with various adverse climatic influences to which the crop was subject, they reduced the yield to something little better than a failure; and apparently in a good many even of the western counties the supply of seed would be insufficient for local requirements. It is also to be borne in mind that over a very large portion of the province no attempt is made to grow clover for seed, and that owing to recent failures of the crop in western and central Ontario from repeated attacks of the midge the area devoted to clover seed culture last year was very considerably less than the year before. But far from favorable though the returns were in the aggregate last year, there were yet apparent in them two or three circumstances which should prevent farmers from too readily discontinuing this particular branch of agricultural industry. In the first place, although, as already remarked, the greatest insect enemy of the clover crop was still widely prevalent, its ravages were considerably less in many localities than they had been for several years back; and though the clover midge may not have the good grace to follow its ally the pea-bug to nothingness or the north pole, or wherever else is situated the limbo of departed insect pests, yet the signs of its departure are sufficiently numerous to encourage the farmer to further trials of a crop which, barring the presence of this pest, would be, in many parts of the province, a very valuable one. In the next place, according to the testimony of many correspondents of the Bureau, in those counties in which the raising of clover for seed is still persisted in, the midge may be pretty successfully eluded even if it cannot be driven off the field. Over and over again it was stated in the returns that when the clover is pastured until the first week or two in June the midge is defeated and a good crop of clover seed secured. This system appears to have been largely followed in the western part of the province last year, and almost invariably with satisfactory results. In addition to the midge the dry weather was in a good many localities assigned as a cause of failure last year, and in others the seed was spoiled by wet weather in harvesting. Frost in December and January heaved out the clover in some parts of the county of Lincoln, though in other parts of that county it was reported a better yield than for the two preceding years. Alsike clover seems to be increasing in favor, and last season it did much better than the common red variety.

FROM THE AUGUST REPORT.

Wm. Millen, Gosfield, Essex: Hay crop first class, with a few exceptions. Drouth made the crop shorter than usual, and it did not thicken. Winter frosts heaved new clover meadows, a thing rarely known here. Condition could not be better, excepting a single shower on clover early. The seed crop is very short on account of the drought; otherwise fair.

W. C. Fletcher, Tilbury East, Kent: Quality good. Hay light; will be about half a crop. Drouth shortened the crop. Winter frosts injured clover over one year old. The weather for harvesting was excellent. Prospects for clover seed poor; no growth. Red-top and blue grass showed more or less of premature ripening; cause, joint-worm.

L. M. Brown, South Dorchester, Elgin: Newly-seeded mixed timothy and clover a heavy crop, mostly secured in good condition. Old timothy rather light but well secured. The midge has about stopped the raising of clover seed in this section.

Chas. Chute, Malahide, Elgin: Quality good; crop rather light; good haying weather. Clover seed crop is the best in several years. The fields look red with blossoms, which they have not done before since the advent of the midge. Some spear grass ripened prematurely because of an insect in the upper joint.

E. M. Crysler, Charlotteville, Norfolk: Last year's seeding is very good. Old clover was badly killed by the winter frosts. The weather was fine and the crop secured in good condition. Very little seed is grown in this vicinity.

Joseph Mumby, Moulton, Haldimand: Quality good; the crop injured some by drouth. Weather fine and the crop secured in good condition. Alsike seed good; red clover injured by midge. Blue grass and timothy were injured by something, but I do not know what.

D. Schooley, Bertie, Welland: Frost and drouth injured the clover some, and so the crop is a little light. Seed crops are apparently good where pastured till the 10th of June. In one field of spear grass several large spots dried up. I did not examine the cause.

B. B. Smart, Sarnia, Lambton: Quality first-class; crop shorter. Seed poor; I think there is a good deal of midge in it. I have observed a good many stalks of timothy white before cutting time, caused by a small worm in the joint.

J. H. Patterson, Dawn, Lambton: Frost and drouth reduced the crop about 50 per cent. Seed poor at present, owing to dry weather. Have noticed premature ripening of blue grass and timothy for several years, and it seems to be increasing; cause, a minute joint-worm.

G. W. Holman, Usborne, Huron: Crop not more than two-thirds; weather very dry; frost did considerable damage. Hay was secured in most excellent condition. The seed crop of clover is not very good.

Thomas Welsh, Huron, Bruce: Hay crop generally light, but saved in good condition. It made a good start early in spring, but the weather was wet and cold till June, then dry and cold till haying, so that the hay made little growth. Prospects for clover seed excellent where pastured.

J. B. Ritchie, Greenock, Bruce: Quality middling. A great deal was killed out last winter—not heaved by frost, but rotted. The haying season was a very fine one, and a great deal was secured in fine condition.

A. Stephen, Sullivan, Grey: An average crop in this township. In some localities the frost damaged timothy in low lands, and on high, light lands the drought hurt old meadows.

John Morice, Normanby, Grey: Timothy excellent quality. Clover not so good, being pinched by the June frosts and the drouth afterwards. Secured in fine condition. No seed clover grown here. I have not observed premature ripening unless in the spear grass, which was cut by an insect at the first joint.

Angus Bell, Nottawasaga, Simcoe: The quality of the hay crop is fair. The long drouth which prevailed in the month of June had the effect of causing many old meadows to be turned into pasture fields. The weather was showery, but on the whole the crop was secured in good condition. There is no attempt here to raise any clover seed.

James A. Glen, Westminster, Middlesex: Quality good; less midge. The drouth shortened it very nearly one-half; the frost did very little damage. The weather was excellent throughout, and the crop secured in first-class condition. The dry weather has hindered the growth of seed clover, but there is less midge than usual, and the showery weather now will do it good. There is not one-tenth as much grown as formerly.

W. D. Stanley, Biddulph, Middlesex: The quality is all that could be desired; could not be better. The drouth had a very injurious effect. Hay and clover are very light and will not average much over half a crop. The crop was saved in prime condition. Owing to the long drouth there has been little or no second growth of clover for seed.

Thomas Baird, Blandford, Oxford: Hay is of excellent quality, though only about three-fourths of a crop. May and June frosts, followed by the drouth, had the effect of reducing the quantity, but did not hurt the quality of the crop. The prospect for seed clover is very poor, both on account of the midge and the scorching of the pastures.

John F. Tribe, Dereham, Oxford: Hay crop good; the best in ten years. Average, two tons per acre; and was saved in first-class order.

Thomas Lunn, Oakland, Brant: Haying began June 28th. Fine weather continued throughout, many securing the crop without a drop of rain, so what is deficient in quantity will be made up in quality. Old meadows were badly winter-killed. White clover has ripened well, from 120 to 140 grains being taken from single heads. Red clover pastured up to June 10th promises well for seed.

D. Stewart, North Easthope, Perth: Quality good. Both drouth and cold had the effect of lessening the crop a good deal, but it pulled up well the last two or three weeks before cutting.

Wm. Rae, Pilkington, Wellington: Hay an average crop; considerably injured by drouth. Crop in most cases secured in good condition. No clover for seed grown in this section.

J. Connell, Minto, Wellington: Drouth and frost affected hay very much; not half an average in many places. Crop secured in good condition.

Levi Witmer, Waterloo, Waterloo: The quality of hay is number one. We had no rain while haying. Frost had no effect on the hay crop, and drouth very little. Clover was short. No prospect for clover seed on account of drought.

W. Dynes, Mono, Dufferin: Hay, in general, light. About half of it well saved; the rest badly damaged. No second crop of clover in this locality.

D. B. Rittenhouse, Louth, Lincoln: Quality good; no injury by drouth or frost. We had the best of weather for haying, and the crop was secured in the best condition. I think seed clover will be ruined by insects.

Erland Lee, Saltfleet, Wentworth: Clover where not frozen out was a good sample for feed, though perhaps too light a crop on high and dry land. Large red is an excellent crop. Old meadows were very light, though good hay. Good weather for haying; not much chance for seed.

Colin Cameron, Nassagaweya, Halton: The new meadows were very good; the clover came out in bloom, which it had not done for two years before. The old meadows were short because of the drouth in June. The hay is secured in excellent condition. The young clover is alive, but very weak compared with last year. Red-top and speargrass appeared to be affected, the latter by an insect at the joint.

Peter McLeod, Chinguacousy, Peel: Hay crop was good. Clover was excellent, except on low lands where it was winter-killed through the formation of ice. The crop was secured in first-class condition. There is little or no red clover grown for seed. Alsike is grown extensively, and has been an excellent crop.

Thomas Scott, North Gwillimbury, York: Hay crop was light, hurt by the drouth in June. I think a hot week in April followed by cold weather also hurt it considerably, especially clover. The crop was secured in pretty good condition. I have 26 acres of red clover for seed and looks well, as does red clover all through the township, where there is considerable.

D. B. Nighswander, Markham, York: Quality medium. Frost destroyed most of the clover, but timothy was about an average crop. Early cut hay was well secured. Wet weather from the 14th to the 18th July did considerable damage. Hay crop after the 18th is well secured. Alsike clover good; red neary a total failure.

Alex. McGregor, Reach, Ontario: Quality of the crop for the greater part good. The cold winds and frost in the spring injured the old meadows, and they were very light. New meadows were good. Wet weather in the middle of haying caused nearly a week's delay. All that was secured before and after that was good. Good prospect for seed clover.

Wm. Windatt, Darlington, Durham: Quality good; no injury by frost or drouth. One week of wet weather in the midst of haying operations injured a large quantity of hay. Clover for seed is good. Joint-worm in timothy and red-top ripened some prematurely, but to no great extent.

James Parr, Cartwright, Durham: Quality of crop poor; drouth in June being the apparent cause. The weather was very unfavorable for haying operations, and in consequence hay was not secured in a good condition. Prospect for seed clover is good.

John Williams, Hamilton, Northumberland: Quality good, but slightly damaged by drouth or frost. All that was saved before the 14th July was in splendid condition, and I should think two-thirds was saved in good condition. The week of rain that followed seriously injured both clover and timothy.

James Roberts, Alnwick, Northumberland: Quality very fair. Drouth materially lessened the quality. Not affected by frost. The first cut was saved in fine condition, but not so the last. Seed clover is almost a failure on account of drought.

Nelson Rose, North Marysburgh, Prince Edward: Quality very good. Frost did little harm, but drouth did considerable. Weather for haying was mostly good, and the crop was saved in good condition. The first crop of clover was full of seed, but very little was saved. The second crop is starting nicely.

George Lott, Richmond, Lennox and Addington: Quality good. Drouth retarded it in the earlier stages of growth, but the late rains, to a great extent, counteracted this. Weather was generally favorable for haying, and the bulk of the crop was secured in good condition. Seed clover is fairly good at present on early cut meadows. There has been premature ripening in some grasses, principally timothy, which I attribute to an insect working in the joint of the stalk. Old meadows are principally affected.

R. J. Dunlop, Pittsburg, Frontenac: Hay fairly good on new meadows, but on old meadows light. Timothy badly damaged by the joint-worm and also by late frosts in May; but a large quantity has been saved in good condition. Clover short and light on the ground. There is not much prospect of a second crop unless copious rains should come.

H. C. Lynch, Front of Escott, Leeds: Fair to good. Frost hurt the grass considerably. Most hay was put in good condition. The army or joint-worm worked quite badly in timothy, and caused considerable dead tops, say, in many cases, one-fifth of the whole.

Wm. Kyle, Williamsburg, Dundas: Good. No injury, for we never had a season in this part in the last forty years so free late from frost and drouth as this. Hay saved in good condition, except a little cut this week. A considerable amount, both of speargrass and timothy, was injured by a worm in the stalk.

Kenneth McLennan, Lochiel, Glengarry: Mixed hay and clover, first crop is good; second crop is not so good. The first part of the haying season was very wet, and most of the hay was damaged; but the people are busy at it now and the weather is better.

Wm. McClintock, West Hawkesbury, Prescott: The quality of the crop in general is good. No damage by frost or drouth. The weather is very unfavorable for hay-saving, and a good deal of it is badly bleached. Not more than half the hay is cut yet.

John O'Callaghan, Gloucester, Carleton: Hay is not an average. Frost and cold weather in the last of May and first of June stopped its growth. New meadows are fair. Hay was not saved in good condition owing to wet weather.

F. Kosmack, Admaston, Renfrew: Clover all more or less spoiled with wet. The clover, where the wind had blown the snow off in winter, was winter-killed. From the ninth to the twenty-second of July the weather was extremely wet; all hay cut in that time was much damaged, but many delayed cutting and secured in good condition.

W. Patterson, Ramsay, Lanark: A good deal of hay and clover was winter-killed, but owing to abundant rains and favorable weather the crop is a fair average one; most of the crop is well saved, but one wet week hurt some of it considerably. A good deal of it prematurely ripe among the timothy. We attribute it to joint-worm.

Amos Howkins, Eldon, Victoria: Quality of crop good, but a little on the short side, caused by a very dry May; I never saw a better time for curing it, as we had no rain for weeks at a time, especially during clover season. Alsike clover-seed very good, but not much grown this year; red, very little allowed to go to seed, but those who pastured it the first part of the season, have very encouraging prospects for good yields of seed.

J. M. Drummond, Otonabee, Peterboro': Hay crop very good; clover rather short on account of drouth. The bulk of hay was housed in splendid condition. A few fields badly spoilt in the last week of haying. Clover for seed is well blossomed; no weevil. Heads that are nearly filled are full of seed, but straw very short on high land, about a foot in length.

John Garbutt, Smith, Peterboro': The quality of the hay and clover crop is good. The frost affected timothy on low ground. In the beginning of haying the weather was very fine, but the latter part was affected a little by rain. It was secured in good condition. The prospect for the clover-seed crop is very good; in timothy and red-top there was considerable premature ripening, caused by a worm in the joint.

Henry Ferrier, Stanhope, Haliburton: Hay very good. Drouth in the early part of the season caused it to make a slow growth, but later rains fetched it along. Haying has been wet, yet the crop has been saved in pretty good condition.

Wm. Watt, Wollaston, Hastings: The clover crop is a very heavy one; some fields were blackened with wet weather, but in general timothy and clover both are very well saved. Timothy was a very good crop.

H. W. Gill, Watt, Muskoka: The quality of the hay and clover crop is good. Drouth has caused a generally light crop; no frost in this section. Showery weather has hindered operations; the crop, so far, however, is well secured. Cannot say what is the prospect for the clover-seed crop. I have noticed premature ripening owing to the drouth.

S. J. Peake, Foley, Parry Sound: Hay, about half crop in old meadows; new meadows, average crop. Haying not quite finished yet; what has been gathered in is well saved.

R. F. Ogle, Campbell and Carnarvon, Algoma: On properly seeded farms the crop turned out very good, but in general it is short owing to too long drouth. No injury from summer frost, but some slight injury was done by winter frost. Considerable damage was done by fire.

FROM THE NOVEMBER REPORT.

The following extracts refer to the crop of clover for seed:

John Buckland, Gosfield, Essex: Some good crops, but on the whole will be short; injured by the midge.

Geo. Green, Chatham, Kent: Condition of clover crop good, and nearly all the midge have taken their leave. No injury by frost.

Edmund B. Harrison, Howard, Kent: Clover pastured to about June (not cut for hay) will most likely be a good crop of seed; not damaged by frost.

Dugald Campbell, Dunwich, Elgin: Alsike good; red very little kept for seed; midge has taken from 75 to 80 per cent. This is raising seed on shares.

Chas. Chute, Malahide, Elgin: Fields which were cut early are an excellent crop. The first crop in most cases was well seeded, and some farmers saved it for seed. We find early cutting better than pasturing, when cut between the 5th and 10th of June.

Robt. Watson, Windham, Norfolk: On fields that were pastured to the first or middle of June the clover is very good; the fields that were cut about the last of June or first of July about half a crop; badly damaged by the midge.

E. M. Crysler, Charlotteville, Norfolk: Grasshoppers destroyed the young clover last year, so there is very little clover seed grown in this vicinity this year.

Arthur Simenton, Seneca, Haldimand: Midge not so bad as last year, but there is an insect in the root which is doing great damage.

John H. Houser, Canborough, Haldimand: All kinds good; not damaged by frost or midge. Some farmers are threshing at the time of writing this report, and it is yielding large returns and of good quality. The little red clover is doing the best.

V. Honsberger, S. Cayuga, Haldimand: Very large yield of red clover straw for seed; no damage by frost. Second crop for seed greatly injured by midge. Pastured fields that were turned off from about June 5th to 15th produced a large crop of splendid seed. Alsike yields well; no midge.

L. Buckton, Crowland, Welland: Some have threshed, and they report that where the fields were pastured or cut before the 10th June the crop is good; later clover considerably damaged by midge. The midge is reported as cutting the clover in the mows.

Jas. McClive, Bertie, Welland: Clover very poor and unsatisfactory. The small red was badly hurt by midge, and in consequence most farmers in Bertie sowed Alsike last spring for the first time.

Wm. Wight, Bosanquet, Lambton: Clover that was pastured, good; it seems to be the only way to get seed now. No frost; midge destroyed two-thirds of the late crop.

Jas. Thomson, Warwick, Lambton: The clover crop for seed is poor; nearly all eaten up by the fly with the exception of what was pastured until June and then let go to seed.

Thos. Strachan, Grey, Huron: Very little grown for seed. It was not damaged by frost or midge this year, but owing to dry weather the after crop did not do well.

Henry Doupe, Usborne, Huron: There is no clover crop for seed in this part of the country; the second crop is either fed off or cut for winter feed. The midge is the cause of it.

Wm. Smellie, Amabel, Bruce: No second crop of red clover is grown for seed. The Alsike clover is a good crop of seed—first crop cut.

Walter Hartman, St. Vincent and Collingwood, Grey: Very little here this year; not injured nearly as much as it has been for some years by the midge.

John Lennox, Innisfil, Simcoe: Any clover seed grown here is pastured till the middle of June and saved between the two breeds of the midge. Seed is good but smaller in the kernel than usual.

C. Cooke, Tecumseth, Simcoe: Clover crop for seed not more than half an average crop; mostly injured by winter frost.

A. H. Secord, N. Dorchester, Middlesex: Only one field of seed in this vicinity, which was pastured until June 10th, and it is good. I think there is 75 per cent. less midge than last year.

James G. Pettit, E. Oxford, Oxford: Clover was a light crop an account of the dry, hot weather during and for some time after the first crop was taken off, but is fairly well filled, and quite free of midge.

Thos. Lunn, Oakland, Brant: Clover pastured up to June the 10th and then saved for seed is reported very full of seed and injured but slightly by midge. What was cut later for hay and then saved for seed has been less damaged by midge than formerly, still it cannot compare with that cut in June.

John Campbell, Blanshard, Perth: Where clover was pastured until about the middle of June it turned out a fair crop. Where first crop was cut it is a failure. The midge and frost ruined it; and in many cases the cattle were turned in upon it at the last moment.

Thos. Mitchell, North Dumfries, Waterloo: Better than for some years. Those who cut early for hay and allowed the second crop to seed expect nearly an average of good seed. Midge not nearly so plenty as formerly.

James Stull, Grantham, Lincoln: Very little clover seed raised in this vicinity. The midge was not as bad as former years. The frost damaged the clover very much last December and the first week in January.

Erland Lee, Saltfleet, Wentworth: Clover crop was scant, consequently seed crop scarce. Frost killed old clover sod and the new as well, except where well sheltered by long stubble or woods. The midge apparently on the decrease.

W. G. Fletcher, Binbrook, Wentworth: Alsike good; very little red clover; the latter was damaged by midge.

Colin Cameron, Nassagaweya, Halton: The clover crop was rank, and blossomed better than for the last couple of years, but on examination it was found that there was scarcely any seed on account of damage done by the midge.

Peter McLeod, Chinguacousy, Peel: In my last report I mentioned that there was little or no red clover grown for seed. I was not aware of it at the time, but there are several fields in the neighborhood. There was no injury done by midge, but some was damaged by wet weather after being cut on account of it sprouting. The clover crop was in general light.

John Sinclair, Chinguacousy, Peel: The midge has utterly ruined the clover crop for seed.

D. B. Nighswander, Markham, York: Not very good except Alsike, which is very good; badly hurt by midge, especially red clover.

N. A. Malloy, Vaughan, York: Where pastured till middle of June, a good crop; where not cut till July, poor. Some damage by midge, but less than last year.

J. D. Evans, Etobicoke, York: I don't know of a single field of clover seed. Farmers have ceased trying to grow it on account of the midge.

Henry Glendinning, Brock, Ontario: Alsike clover seed will be an average crop; red clover seed better than it has been for some years; very little injury done by midge, except very late pieces.

Alex. McGregor, Reach, Ontario: Clover that was pastured till the second week in June is well seeded. Any that was mown has very little seed—so much cold, wet weather in September that it did not ripen. Alsike promises a good fair crop.

Robert Hodge, sr., Clarke, Durham: Clover not by any means good. The dry weather injured it and it did not seem to ripen even; then when cut the weather being very wet a lot of it grew next the ground.

Wm. J. Grandy, Manvers, Durham: Clover crop was splendid this season, but it was considerably damaged in harvesting by rain and warm weather, causing it to sprout. No damage by frost, and very little by the midge.

W. J. Westington, Hamilton, Northumberland: Alsike clover good; about 50 per cent. of the clover crop injured by midge.

Walter Riddell, Hamilton, Northumberland: The clover seed crop was rather better than last year, but was seriously damaged by wet warm weather in the last half of September, when much of it was lying cut; it grew badly. No damage by frost; a good deal by midge.

B. C. Lloyd, Camden, Addington: Very good where first crop was harvested from 10th to 20th June; if later, mostly taken by midge.

C. R. Allison, S. Fredericksburg, Lennox: Seed clover was the best and likely to yield better per acre than for years, though the later crop was hurt by fly.

R. J. Dunlop, Pittsburg, Frontenac: Clover second crop of no account for seed. The long spell of dry weather after harvest prevented any considerable growth.

Wm. Ramsay, Mariposa, Victoria: Not much red clover seed around here; Alsike clover is a fair crop. No damage by frost or midge that I know of.

John Westlake, Eldon, Victoria: The clover crop is the finest it has been for years.

Wm. Armstrong, Otonabee, Peterboro': The seed clover crop will be a fair average one, as it bloomed and ripened well. There was no sign of midge. There is none threshed yet.

J. R. Ketcheson, Madoc, Hastings: Good when pastured to first of June; damaged very largely by the midge when cut and left for seed.

FIELD ROOTS.

Potatoes were last year an unsatisfactory crop throughout the greater part of the province. There were many causes contributing to this failure, but a very heavy percentage of the damage is to be credited to two agencies—drouth in the west and excessive rains in the east. For the counties of Simcoe and Ontario westward, the growth of the potato plants was very much retarded by the dry weather of early summer, and it was only under exceptional circumstances that they were able to contend with this adverse influence. In a good many cases, too, the inferior quality of the "sets" or cuttings had much to do with the poor growth. Owing to the rot in 1885 these had to be largely imported, and either from intrinsic defects or from injury in transit many of them failed to sprout. It is worthy of notice that special care in preparation of the soil before planting and cultivation afterwards was rewarded by superior crops. In the part of the province spoken of, though the crop came much below the average in quantity, it was generally fair in quality. The potatoes were mostly small and few in the ground, but sound and good for use. In heavy clay and low mucky soils they were frequently found to be affected with the rot; but the percentage injured in this way appears to have been low, compared with that of the previous year's crop. Only a few correspondents spoke of the presence of the rot after the roots were taken up, and little damage to the crop in store was anticipated. In the counties included in the angle of the St. Lawrence and the Ottawa, from Leeds to Renfrew, a bad condition of the potato crop was the rule. In that district the excess of rain committed greater havoc than did the drouth in the west, and a lamentably large percentage of the crop rotted in the ground. In many cases both the tubers and the tops were injured, the latter being attacked by rust or blight. The reports which mentioned even fair returns in any of these counties were very scarce indeed. In the counties along Lake Ontario and the St. Lawrence, from Durham to Frontenac, the crop escaped fairly from extremes of drouth and wet, and the yield was moderately productive. Complaints of shortage and rot came from a few of the correspondents, especially in Northumberland and Prince Edward, but they were exceptional. In the East Midland counties, lying immediately to the north of those last mentioned, the crop was somewhat better, particularly in Haliburton, where it seems to have been unusually good. In the northern districts also the yield and quality seem to have been satisfactory. The Colorado beetle was present in force, though the reports from some districts indicated that it was less troublesome than usual. The careful use of Paris green was generally sufficient to overcome this pest, but many farmers complained of the negligence of neighbors in disposing of the "bugs," a negligence which generally affected the whole district to some extent. One or two reports mentioned the presence of the potato aphis, but it was not at all prevalent. The following tabulated statement shows that both the acreage and the average production were much lower than in the previous year:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Lake Erie	14,193	1,470,553	103.6	17,346	1,539,992	88.8
Lake Huron	11,627	1,043,361	89.7	13,491	2,168,126	160.7
Georgian Bay	12,679	1,399,874	110.4	14,350	2,687,939	187.3
West Midland	23,150	2,509,607	108.4	28,263	3,127,374	110.7
Lake Ontario	27,685	3,037,815	109.7	31,016	3,405,194	109.8
St. Lawrence and Ottawa	37,142	4,455,515	120.0	40,736	6,107,611	149.9
East Midland	11,137	1,625,216	145.9	11,821	1,651,143	139.7
Northern Districts	2,530	470,417	185.9	2,718	403,765	148.6
Totals	140,143	16,012,358	114.3	159,741	21,091,144	132.0

Turnips were, on the whole, a very satisfactory crop. Their growth was at one time threatened seriously by drouth in most of the counties, but the rain came in time to save them and secure a good yield. Some correspondents spoke of having grown or seen in their neighborhoods turnips of unusual size, and the warm growing weather in October gave the crop a longer season to improve than is generally accorded it. A very satisfactory feature was the almost entire absence of the turnip fly, only two or three correspondents mentioning any damage from this pest. The statistics of the turnip crops are as follows:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Lake Erie	1,729	723,076	418.2	1,664	668,325	401.6
Lake Huron	11,226	5,465,045	486.8	12,739	5,933,288	465.7
Georgian Bay	12,180	5,836,063	479.2	12,154	5,503,918	452.8
West Midland	32,163	16,775,690	521.6	35,131	13,210,389	376.0
Lake Ontario	29,628	13,448,480	453.9	28,525	11,973,449	419.8
St. Lawrence and Ottawa	4,129	1,550,598	375.5	3,832	1,371,476	357.9
East Midland	5,562	2,473,171	444.7	5,775	1,791,547	310.2
Northern Districts	2,314	788,930	340.9	2,483	685,343	276.0
Totals	98,931	47,061,053	475.7	102,303	41,137,735	402.1

In each of the districts the average yield was higher in 1886 than in 1885, and in the dairy and beef-producing counties of the West Midland and Lake Ontario groups the aggregate increase was over 5,000,000 bushels.

Owing partly to bad seed and partly to unfavorable weather at seeding, mangel-wurzels failed to "catch" in some places, but the after part of the season was very favorable, and they made rapid growth. Specimens of great size were gathered in more than one locality. The acreage was considerably increased from 1885, and the average production was much better, as will appear from the following table:

Districts.	1886.			1885.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Lake Erie	1,202	613,320	510.2	1,215	564,003	464.2
Lake Huron	2,174	1,133,350	521.3	1,827	896,933	490.9
Georgian Bay	983	510,356	519.2	973	448,248	460.7
West Midland	5,869	3,136,511	534.4	5,370	2,490,285	463.7
Lake Ontario	5,100	2,271,138	445.3	4,809	2,315,051	481.4
St. Lawrence and Ottawa	1,770	672,221	379.8	1,399	580,938	415.3
East Midland	987	424,547	430.1	781	347,648	445.1
Northern Districts	85	26,300	309.4	61	17,623	288.9
Totals	18,170	8,787,743	483.6	16,435	7,660,729	466.1

Carrots were somewhat more injured by the drouth than turnips and mangels, but they, too, were enabled to make good headway in the latter part of the season. The

acreage and yield were much the same as in the previous year, the annexed table giving the comparison in detail :

Districts.	1886.			1885.		
	Acres.	Bushel.	Bush. per Acre.	Acres.	Bushels.	Bush. per Acre.
Lake Erie	613	208,297	339.8	610	218,209	357.7
Lake Huron	856	322,490	376.7	757	344,559	455.2
Georgian Bay	1,096	450,606	411.1	1,079	435,088	403.2
West Midland	1,953	816,562	418.1	1,985	736,333	370.9
Lake Ontario	2,447	930,866	380.4	2,476	1,019,168	411.6
St. Lawrence and Ottawa	1,471	453,200	308.1	1,184	387,886	327.6
East Midland	710	264,380	372.4	797	285,089	357.7
Northern Districts	121	32,350	267.3	136	35,987	264.6
Totals	9,267	3,478,751	375.4	9,024	3,462,319	383.7

The weather was extremely favorable for the harvesting of roots, and they were nearly all housed in excellent condition.

FROM THE AUGUST REPORT.

Wm. Millen, Gosfield, Essex : Potatoes are small; too dry. Turnips almost a failure, as they have not grown for a month. When the potatoes, etc., were small, we had a very heavy rain, which scalded them ; since then we have had a drought and everything is small.

E. B. Harrison, Howard, Kent: Potatoes in some places badly affected by a very small insect (*aphis*). Potato beetles very numerous. Drouth has prevented due growth. In other places, vines healthy ; tubers small and few ; the late rains have had a favorable effect. Mangles and carrots are doing well.

Geo. Green, Chatham, Kent : The bugs have destroyed many acres, and the long dry spell has retarded their growth. There will be more small ones than of late years. Mangel-wurzels look well ; turnips are not much grown—I do not know of a patch around here; carrots are dried out.

D. McKillop, Aldboro', Elgin : Potatoes in some parts of the township have been very seriously affected by the drouth ; more particularly so on hard clay lands and gravelly soils. On sandy soils the crop promises to be fair—where properly attended to. Bugs have been very numerous this season. The same remarks will apply to turnips, mangel-wurzels and carrots.

A. N. Simmons, Middleton, Norfolk : Potatoes promise well if the present heavy rain storms do not continue too long, though symptoms of rot are visible occasionally. All other root crops look healthy, where attention has been given them.

F. A. Nelles, Seneca, Haldimand : Roots promise tolerably well, although the mangels did not start well on account of a couple of weeks dry weather at seeding time.

Jas. McClive, Bertie, Welland : Roots are not doing well ; season started too late and afterwards too dry. Roots are not generally cultivated, but mangels succeed best and give best results. I prefer the Yellow Globe mangels.

John Varcoe, Colborne, Huron : Potatoes will be a very poor crop in this township this year. The potato beetle has been extremely bad, and besides that the vines have made very poor growth ; they look weak. All other root crops are looking very fair, but are all suffering a little from the drouth.

Frank Morley, Usborne, Huron : Good seed potatoes were scarce, and much of the seed shipped in did not grow well. The season has been so very dry and the ravages of the bugs so severe that the tubers are not large or very plentiful in the hills. Turnips are not promising very well, except those sown early on very well prepared land ; a great many fields ploughed under. Mangels very thin as a rule, and backward on account of drouth ; carrots same as mangels.

John Douglass, Arran, Bruce : Potatoes very much affected with bugs, will not be a heavy crop. Turnips promise well ; no insect pest this year ; weather favorable. Mangels will also be an average crop ; carrots not so good.

W. Totten, Keppel, Grey : Roots are looking well ; turnips will be a fair crop ; mangels not extensively grown but look well. Potatoes look well, but the potato-bug is persisting in its right to the fields. The farmers are using Paris Green freely. Carrots are only grown in small areas.

James Brodie, Artemesia, Grey : Potatoes in some cases look well, in others, either from bad seed or some other cause, they look very poor, not more than half of the ground being covered. Turnips and mangel-wurzels look well at present but rain is badly needed.

Angus Bell, Nottawasaga, Simcoe: Potatoes and other root crops are in a very flourishing condition and a large yield is expected. Potatoes in particular are an excellent crop, though the potato-beetle is still troublesome. Many new varieties of potatoes are being introduced.

R. Coad, Ekfrid, Middlesex: Roots generally promising, except potatoes. Potatoes the worst crop I can remember seeing in this district; they seem to have failed from extreme drouth after planting and disease in the sets planted, causing big gaps in the rows; the bug just as bad as usual. The other root crops are promising; turnips little injured by the fly.

James Anderson, E. Zorra, Oxford: Potatoes look well where good seed was planted, but most of the seed was imported from other counties and seemed to have been injured in transit; bugs as plentiful as ever. Turnips have grown very slowly on account of the dry hot weather, but are very even and promise well; mangels look well but have suffered the same as turnips; carrots very little grown.

Thomas A. Good, Brantford, Brant: Potatoes promise well, but bugs very thick, more than I ever saw before. Turnips on loamy soil look very well, clay not so good; I have as good as ever I had. Mangels and carrots also promise a heavy crop. Roots as a rule promise a heavy crop on good land; clay got baked a little and they are not as forward on it.

A. McLaren, Hibbert, Perth: Potatoes were promising in appearance early in the season but are now getting yellow, the tubers dying away. The appearance of turnips at present is promising, but they are in need of rain and moisture; mangel-wurzels and carrots are a total failure, owing to the dry weather.

Thomas Steele, Downie, Perth: Potatoes a poor crop, did not grow well; the cause is a disputed point, some saying bad seed and others too dry. The seed had all to be imported here; I think it got hurt in transit. Turnips looking splendid, very little fly this year; mangel-wurzels very good; carrots very good but thin on the ground, as the braird was not good owing to dry weather.

James Cross, Peel, Wellington: Potatoes look very bad almost everywhere; between bugs and bad seed we do not expect a good crop. Turnips will be fair, mangolds look well, also carrots; the weather was favorable here so far.

H. McDougall, E. Luther, Dufferin: Potatoes generally good, some seed missed in the spring, probably being bad at planting; I notice some of the stalks withering; on examination it is found to be decayed at the bottom of stalk up to level of the ground. Turnips are promising a good crop; neither mangels nor carrots are much grown here, but the few that have been planted are in good condition.

John Secord, Grantham, Lincoln: The root crops are only doing middling owing to the lack of moisture. The potato bug is doing his work, and only for the Paris Green it would destroy the crop

John Ireland, Ancaster, Wentworth; Potatoes do not look generally very promising. The bugs have done great injury and the dry weather has also had an effect. Turnips are doing very well when sown before the ground became dry so that they had an early start. Mangels and carrots very promising.

Dr. F. C. Sibbald, Georgina, York: Potatoes very good, but bugs thick as ever, requiring to be sprinkled with Paris Green every week. Turnips, mangels and carrots all looking well. The rain which fell on the 14th July and at short intervals since then has generally improved all crops.

Wm. James Grandy, Manvers, Durham: Potatoes show a fair prospect; they were attacked by the Colorado beetle to a large extent, but by the use of Paris Green the crop is kept from being destroyed. The turnip prospect is good; not much attacked by the fly. Other roots show a good prospect.

James Roberts, Alnwick, Northumberland: All roots promise fair returns except potatoes, which in some cases are a complete failure owing to drought and bugs.

Leonard Wager, Sheffield, Lennox and Addington: Potatoes look well but lots of bugs. Mangels and turnips look extra good.

R. J. Dunlop, Pittsburg, Frontenac: Potatoes look well but are badly attacked by the bugs; they were unusually plentiful this year. Mangels look fairly well; when late sown the drought set them back; carrots about the same as mangels. All depends on the autumn weather, whether they will do well or otherwise.

Thomas McDowell, South Gower, Grenville: The potato, which is about the only root crop raised in this section, looks well; some say that their potatoes are beginning to be struck with rust. Slip-shod farmers, as usual, have their potatoes more or less damaged by the irrepressible potato bug.

Robert Vallance, Osnabruck, Stormont: Potatoes promising; turnips not raised: mangels and carrots doing well.

James Clark, Kenyon, Glengarry: Potatoes looked promising until lately, when in many places the tops have become blackened; supposed to be a blight. The bugs are not worse than usual. Turnips that have escaped the fly look well; mangels are good in general; also carrots are good. The fly was hard on turnips and mangels in their early stages.

Wm. McClintock, E. Hawkesbury, Prescott: Potatoes are the only kind of root crop raised about these parts. The bug gave some trouble, but with Paris green and land plaster we soon disposed of them. I see in several places signs of rust; the leaves are falling off, and have that strong smell that potatoes have when affected with the rot.

Wm. Doyle, Osgoode, Carleton: Carrots, mangels and turnips, from present appearance, will be an excellent crop. Potatoes have a good appearance; we had good new potatoes on the first of July, the earliest for many years.

John Whelan, Brudenell and Lyndoch, Renfrew: Root crops of all kinds are looking well, and there is promise of an abundant yield; no insects or grubs to hurt so far except the potato bug, but this is being successfully fought with Paris green and London purple.

A. F. Stewart, Beckwith, Lanark: Roots of all kinds look remarkably well for this time of year. No insects except the beetles on potatoes, which appear to be more numerous this year than ever, but Paris green fixes them all right.

Nelson Heaslip, Bexley, Victoria: Roots of all kinds are in excellent condition and promise an abundant crop. Carrots and mangels are further advanced than ordinarily at this date; turnips have made an excellent start and promise an extra yield. Potatoes are doing well, but the Colorado potato beetle has flourished beyond all former years and required diligent application of Paris Green to keep them in check.

James S. Cairnduff, Harvey, Peterboro': Roots are very promising; the late rains have saved the crop. Potatoes doing well; turnips, carrots and mangels are very promising; the farmers are finding out that it pays to raise them—hence they are going in largely for root crops.

Hugh Caldwell, Chandos, Peterboro': Roots good; all doing well. Early potatoes good and dry; some neglected fields were injured by bug. Weather just what was required.

Chas. R. Stewart, Dysart, etc., Haliburton: All roots are looking well. Potatoes are looking splendid; less bugs than usual; have not had to use Paris green at all. Turnips very promising. Have carrots in use for the table; very fine. The weather has been very favorable for all roots.

Anson Latta, Thurlow, Hastings: Potatoes promises to be a good crop if late rains do not cause them to rot like last year. Turnips, mangel-wurzels and carrots are looking well; somewhat infested by insects in the early part of the season. At present the weather is uncommonly favorable; a few more showers will warrant an extra crop.

J. Early, Chaffey, Muskoka: All kinds of roots are splendid; no damage by frost; some little damage to the turnips by the fly.

FROM THE NOVEMBER REPORT.

John Wright, Dover, Kent: Potatoes—quality good, but a very small crop, owing to drouth and the beetle. There were none rotten. All roots are small crops generally, but some few plots that got an early start have done very well. The season is splendid at present for securing the crop for winter.

Dugald Campbell, Dunwich, Elgin: Potatoes are variable. Some complain of rot on heavy soils, but not general.

Jabel Robinson, Southwold, Elgin: Potatoes were injured by the white grub, but very few rotted. Potatoes are a light crop owing to the drought. Mangels are an excellent crop and pretty much all harvested. Carrots and turnips will be harvested next week.

James Morrison, Walsingham, Norfolk: Potatoes were a fair crop and of good quality, but they are rotting fast since taken up.

John Meharg, Houghton, Norfolk: Potatoes are a good crop and of good quality. In low heavy soil they are rotting some, but as a general thing they are not rotting much. Turnips are looking well and are growing nicely yet, and everything looks favorable for a good crop. The root crop is likely to be taken care of in good order as the weather is very favorable at present.

Joseph Martindale, Oneida, Haldimand: Potatoes are an excellent crop and give a large yield, with no rot. Mangels very large and a fine crop; turnips good, also carrots. Potatoes are about all pitted or put into cellars. We are busy now lifting mangels and carrots. The turnips are growing yet.

Wm. Chalmers, Sherbrooke, Haldimand: Potatoes are good but the sample is somewhat smaller than last year. A good many have rotted after being dug. The loss will probably amount to 30 per cent.

G. E. Robertson, Wainfleet, Welland: Potatoes are generally in good condition. There are some cases of rot, but not serious.

Martin Wattson, Bosanquet, Lambton: Potatoes very good indeed; no rot heard of in any direction; but smaller than usual in many localities on account of so much dry weather during the sowing season. Turnips are excellent, yielding 1,000 bushels to the acre in a few places.

Jno. Wright, Goderich, Huron: Condition and quality of potatoes are good where they were kept clear of the bugs, but a good many farmers have not enough for their own use. They have not been injured by rot. Turnips are very good. Mangels are a fine crop and carrots are good. Mangels and carrots are secured, and turnips will be mostly all taken up this week.

G. Edwin Cresswell, Tuckersmith, Huron: The quality of potatoes grown this year is very good, but with the greater number of farmers the yield has been miserable. In certain localities and under special circumstances the yield has been remarkable. No injury from rot. The cause of failure has been the dry summer. Turnips, carrots, and mangels, an excellent crop all over. Carrots and mangels all secured, and a large part of the turnip crop in.

D. McNaughton, Bruce, Bruce: Potatoes generally in this locality are poor, the plant from its start having a delicate appearance, caused no doubt by planting unsound seed and the dry weather; no rot. Mangels were very large but very thin in the ground. Carrots were a good crop.

Joseph Townsend, Sullivan, Grey: Taking it all round, potatoes are only a poor crop this year. The long drouth kept them back and they never rallied on clay soil. There is but very little rot. Turnips very good.

George Binnie, Glenelg, Grey: Potatoes vary from very bad all the way to very good. They are not at all affected by the rot, but on dry soil the hot, dry weather through July and August burned them right up. Turnips when sown were favored with a shower or two which gave them a start and carried them through the dry spell, and the fall rains made them a splendid crop. They are now being stored for the winter. Mangels and carrots are also a good crop.

Basil R. Rowe, Orillia, Simcoe: The rot appeared to strike the potatoes late and damaged some pieces very much, but housing, as last season, seems to have arrested its ravages. Turnips good. Mangels excellent; the rains seem to suit this crop. Carrots good. Much has been secured and much out. There are always a number of "afternoon" farmers.

Geo. Sneath, Vespra, Simcoe: A light crop, injured slightly by rot. Turnips, mangels and carrots—crop and quality good. Mangels and carrots secured; turnips still in the ground.

Wm. Jamieson, Westminster, Middlesex: Potatoes are of the very best quality, but not a very large yield. I hear no word at all of any rot. Turnips made very little headway through all the dry season until of late they seem to pick up, but will be under an average. Mangels have done very well and will be a good yield. Carrots have not come up to an average. Roots are just being handled at this date with good speed.

Richard Jolliffe, North Dorchester, Middlesex: Potatoes are of an excellent quality and a fair average crop. There are some signs of rot since taking up. Mangels and carrots are good crops and are taken care of.

A. H. Secord, North Dorchester, Middlesex: Potatoes are a poor crop generally in these parts and are rotting badly. From present appearances they will nearly all go. Other roots are good. Not much has been done towards housing these at the present.

R. A. Brown, West Nissouri, Middlesex. I have this year the largest, driest and most abundant yield of potatoes that I have had for 22 years; had 100 bushels from ½ acre. Plenty of manure and cultivation, with the dry season, are the causes. Some farmers will have to buy for their own use. None are rotten. Burbank and Chili have done best. My own turnips were only excelled once since I have been farming—that was in 1872. I had several that weighed 96 lbs. Turnips are generally good, but spring drought shortened the mangels.

James Anderson, East Zorra, Oxford: Potatoes thin crop, few in number, but of first-class quality. No rot worth mentioning. Turnips are a very fine crop and mostly secured in good condition. Mangels are a very poor crop in general; all harvested. Not many carrots grown, but fair crop.

Thos. A. Good, Brantford, Brant: Potatoes were about an average, but rotting badly on clay and heavy, loamy soils. They will be scarce and dear and are worth now in the city 75c. per bag of 90 lbs. Turnips are about an average; sound and good quality.

Duncan Stewart, North Easthope, Perth: Potatoes are extra good and dry, but the crop is far below an average, in many cases not one-quarter crop. No rot of any account. Turnips very good and splendid weather to harvest them.

Geo. Leversage, Fullarton, Perth: Potatoes have been a very unequal crop. Some have a good crop, while others will not have enough for family use; no rot. Turnips, mangels and carrots are generally very good. Mangels all saved and farmers busy among turnips.

Duncan Macfarlane, Puslinch, Wellington: Potatoes in some fields, where late, are a fine crop; in others they are a very poor crop. In damp ground the rot has injured them; where the ground is dry there is no rot. Turnips are a very fine crop. Mangels very good; carrots very good. We are busy securing root crops for winter.

W. Brown, Guelph, Wellington: Potatoes good in quality, but very considerably affected by disease—dry rot. All other roots sound. Mangels and carrots all up, and turnips half harvested.

W. C. Smith, Wilmot, Waterloo: Potatoes are of good quality, but a poor crop. The seed did not grow well, except some that we got from Prince Edward Island; these yielded 200 bushels per acre. Turnips a regular crop, but not large. Mangels a poor crop, mostly re-sown with turnips.

Thos. Mitchell, North Dumfries, Waterloo: Potatoes good and quality never better: no rot to speak of. Turnips, mangels, sugar beets and carrots quite equal to the immense crop of last year, and of rather better quality. All busy securing for the winter; another fine week and the bulk will be secured.

George Bailey, Melancthon, Dufferin: Quality of potatoes good, but crop small on account of dry weather.

A. G. Muir, North Grimsby, Lincoln: All kinds of root crops are extremely good, except potatoes, which are poor and will not average over one-half a crop. Turnips, mangels and carrots not gathered yet.

W. M. Calder, Glanford, Wentworth: Potatoes in some cases are an excellent crop. In other cases, especially where late in planting, they did not all come up, in consequence of drouth, and are therefore light. White Elephant, Late Rose, and several other varieties are injured by rot. Turnips a fair crop. Mangels and carrots also fair. Roots are not very extensively raised. Some farmers have secured their mangels and carrots; others are pulling them at present. Turnips not yet touched.

Wm. Clements, county of Halton: Potatoes good; a light crop on the clay, but very good on the sand near the front of the county; no rot. Turnips very good and also mangels. Have not commenced to house them yet.

Peter McLeod, Chinguacousy, Peel: Potatoes in this locality have been in general very poor. In some instances there were not any more potatoes taken up than were planted. The cause was, I believe, that potatoes were kept in warm cellars and had sprouted too much before planting. Another cause was the season being very dry. Mangels and turnips are a good crop. Carrots are not much grown, but what are grown are good.

W. H. Proctor, King, York: Potatoes are housed in good condition. The quality is medium. The rot has affected some, but not nearly so much as last year. Turnips, mangels and carrots are good crops. Busy securing roots now.

George Evans, jr., Georgina, York: The quality of potatoes is good, but they are a very light crop. No rot has yet appeared. Turnips are rather small. Mangels fair, not very large. Carrots very fair. Roots of all kinds have been housed in good order, except turnips, the bulk of them being yet in the ground.

Henry Glendinning, Brock, Ontario: Potatoes very good quality. Have not heard of a single instance of rot. Turnips, mangels and carrots all very good quality. The drouth hurt them considerably in the latter part of August and beginning of September. Good progress has been made in securing all but turnips; farmers are busy at them now.

Samuel Taylor, Mara, Ontario: Potatoes are good in quality, a small yield, but good sample. I have not seen a sign of rot this year in mine. I have heard that some have a little in clay land. Turnips a fair crop, but not so good as last year, on account of drouth. Mangels poor; carrots small. About half the roots are saved in good condition.

Robt. Hodge, sr., Clarke, Durham: Potatoes very fine and good quality; no rot in this part; light crop. Turnips suffered by dry weather. Mangels very good; carrots an average crop.

Wm. Lucas, Cartwright, Durham: Potatoes are exceptionally good; no appearance of rot. Turnips, mangels and carrots are also a good crop. The root crop is now being taken up and secured without, so far, the slightest injury from frost.

David Allan, Seymour, Northumberland: Potatoes—condition, quality and yield very good; about 200 bushels to the acre. Turnips, mangels and carrots all very good, but not extensively cultivated here. Good progress has been made in securing.

M. Morden, Brighton, Northumberland: Potatoes are not good. Rot and scab will ruin half the crop.

George N. Rose, North Marysburgh, Prince Edward: Quality of potatoes good. In very heavy land late potatoes were hurt, but not badly, by the rot. Turnips, mangels and carrots are looking well, but are in the ground yet.

H. A. McFaul, Hillier, Prince Edward: Potatoes are a rather small crop from the extreme dry weather and the potato bug. Not much rot.

P. W. Miller, Kaladar, Lennox and Addington: Potatoes are of good quality; crop not near so heavy as last year; very little complaint of rot. Turnips, mangels and carrots are good crops. They have all been housed for winter.

Fred. Membery, Adolphustown, Lennox and Addington: Some pieces of potatoes will average 120 bushels per acre, and others are not worth digging. On the whole there will be a shortage in this county. Other roots not raised much.

D. J. Walker, Storrington, Frontenac: Potatoes are of an excellent quality; very slight indication of rot in localities. Turnips good and yet growing. Mangels also good and growing. Carrots are good. Potatoes are all saved in good condition; other roots are not dug as the season is so favorable; the greatest growth was in the past month.

John Elkington, M.D., Palmerston, Frontenac: Potatoes a splendid crop. Some farmers tell me that though the potatoes are very large, there are but few in the hill. I must report a marked diminution in the numbers of the Colorado beetle; this is the first year since 1875 that I have used no Paris green whatever.

W. Y. Newman, Oxford, Leeds and Grenville: Potatoes are a poor crop, both in quality and quantity, being small and doughy. Turnips, mangels and carrots good. The root crop has been all housed or pitted in good condition.

John B. Wilson, Front of Lansdowne, Leeds and Grenville: Potatoes very dry and a good size; very few rotten. Turnips, mangels and carrots, few raised, except in gardens, and these are of good quality. About all are secured for the winter.

G. D. Dixon, Matilda, Dundas: Potatoes not very good, especially on heavy soil. They were struck with rust and commenced to rot about the middle of August, but from some cause stopped rotting. What were left were very good.

R. Anderson, Cornwall, Stormont: Two-thirds of potatoes taken with rot. Turnips, mangels and carrots are good, and nearly all secured, but there is not any great quantity of them raised in this township.

James Cattanach, Lancaster, Glengarry: Potatoes are a good crop where they were not injured by rot. In some places it would not pay to dig them; in other places half a crop, according to soil. All heavy soils more or less injured. All other root crops splendid, giving good encouragement to beginners.

James Surch, South Plantagenet, Prescott: Potatoes rusted badly, and are inferior in quantity and quality. Many complain of rot. Turnips are good, the best for some years. Mangels fair and carrots a good crop. Roots are all secured in good condition, the weather being favorable.

Alfred Hill, Cumberland, Russell: Potatoes fair, what are left, but the greater part rotted in the ground before digging commenced. Turnips, mangels and carrots a good crop. They are about all out of the ground.

Wm. Doyle, Osgoode, Carleton: The potato crop was a very poor one. In low clay land they were badly injured by the rot. What were planted on high land remained sound, but very small. Mangels, carrots and turnips were a good crop. They are about all secured for the winter.

H. A. Schultz, Sebastopol, Renfrew: Potatoes are badly affected with the rot. Those that were seemingly sound and good when dug are decayed now on being taken from the pits into cellars. About half a crop. Turnips are a good crop, and were harvested in first-class condition. Mangels and carrots not grown here to any large extent; a fair crop, and housed in good condition.

George Sparling, Stafford, Renfrew: Potatoes very numerous, but about two-thirds of them spoiled by rot. Turnips in good condition and of good quality.

Peter Guthrie, Darling, Lanark: Potatoes are an excellent crop and of good quality; no rot.

G. Hamilton, Ramsay, Lanark: Potatoes are a light crop; affected by blight of some kind which dried up the stocks long before maturity, which has caused a short crop. They are considerably injured by rot also. Turnips, mangels and carrots are fair crops. All secured.

Nelson Heaslip, Bexley, Victoria: Potatoes are of the very best quality; none rotten. Turnips, mangels, and carrots are in splendid condition, and four-fifths of them are secured in winter quarters.

W. A. Maxwell, Laxton, Victoria: Potatoes have not been injured by rot about here. Whatever injury they sustained was from the long drouth. Turnips have not been harvested yet, but from appearance they look small in size.

A. R. Kidd, Dummer, Peterboro': Potatoes are good, and not troubled with rot this year. The crop is somewhat deficient owing to drouth at the time when rain was most wanted. Quality good. Other roots have done well.

Wm. Armstrong, Otonabee, Peterboro': Potatoes are good in quality, but a light crop. There is a slight appearance of rot since they were housed. Roots are all up except turnips, and this is their harvest week.

George Monro, Tyendinaga, Hastings: Potatoes good, but not more than three-fourths of a crop; not injured by rot. Turnips, mangels and carrots good. Most of the roots are taken up in this section.

Dan. Williams, Glamorgan, Haliburton: Potatoes are the best in point of crop or quality known for years. There will be slight loss from rot where grown in low, wet soil. Turnips the same. Nearly all roots are secured.

Charles R. Stewart, Dysart, Haliburton: Potatoes the best crop for many years. They are unsaleable at 20 cents per bushel. Thousands of bushels could be bought at 20 cents, and they are very fine. No rot. No word can describe their excellence except the word "galoptious." All roots are simply splendid.

Edward Bray, jr., Stisted and Stephenson, Muskoka: Potatoes were a very good crop; very few rotted. Turnips not quite as good as other years. Carrots and mangels were excellent. They are all taken up and secured for winter.

Charles Robertson, Cardwell, Muskoka: Potatoes are very good. A little rot but not much. The quality is very good. Turnips are a very even crop. Mangels are good; they are beginning to be more appreciated by farmers. Carrots are the same. The roots are all nearly secured.

J. M. Ansley, McDougall, Parry Sound: Potatoes are good in quality and size, but a small yield. No appearance of rot. Turnips and carrots are good in quality and a large yield.

Capt. D. Macfarlane, Foley, Parry Sound: Potato crop fair; not equal to last year; rotting on clay soil. Turnips fair. Most of the roo crop secured.

J. H. Johnston, Sandfield, Algoma: Potatoes are of extra quality. No injury by rot or any other cause. Other roots are good. Potatoes are mostly secured; turnips are still growing.

COMPARATIVE YIELD OF FIELD CROPS.

The comparative yield of field crops in a series of years enables us to ascertain the direction in which the agricultural industry of the country is tending, and in the history of crops we learn the causes which operate to give results, as well as to influence general movements. The following table presents the yield of our principal field crops for five successive years, together with the average yield of each crop for the period (1882-6):

Field Crops.	1886.	1885.	1884.	1883.	1882.	1882-6.
Fall Wheat, Bush...	18,071,142	21,478,281	20,717,631	11,656,957	31,277,018	20,635,843
Spring Wheat " ..	9,518,553	9,129,881	14,609,661	9,726,063	9,665,995	10,530,031
Barley " ..	19,512,278	16,533,587	19,119,041	18,414,337	24,284,407	19,572,730
Oats " ..	58,665,608	55,229,742	57,696,304	54,573,609	50,501,701	55,333,393
Rye " ..	1,106,462	1,271,506	1,648,259	3,012,240	3,473,799	2,102,453
Pease " ..	16,043,734	14,006,192	13,691,607	10,673,723	11,006,115	13,084,274
Corn (in ear) " ..	10,805,309	10,741,391	12,935,889	.....	13,420,664	11,975,813
Buckwheat " ..	1,678,708	1,530,675	1,484,570	.....	1,262,973	1,489,231
Beans " ..	482,072	496,564	592,044	.....	409,910	495,148
Potatoes " ..	16,012,358	21,091,144	27,546,261	16,400,782	18,432,145	19,896,538
Mangel-wurzels " ..	8,787,743	7,660,729	8,655,184	6,252,015	7,711,420	7,813,418
Carrots " ..	3,478,751	3,462,319	4,197,200	3,984,436	4,009,975	3,826,536
Turnips " ..	47,061,053	41,137,735	44,406,363	29,879,354	35,359,331	39,568,767
Hay and Clover, Tons..	2,994,446	3,252,155	3,044,912	4,115,535	2,090,626	3,099,535

A few crops, such as buckwheat, beans and mangel-wurzels, maintain a steady uniformity; rye is rapidly, and corn more slowly decreasing; fall wheat and spring wheat have alternated with the failures which have overtaken them, and the low prices have not induced farmers to increase the acreage allotted to these cereals; barley, which shared with fall wheat in the bountiful harvest of 1882, is maintaining what appears to be its average; oats is steadily increasing in volume, and pease is increasing rapidly since the disappearance of its old enemy the bug. Pease was an old-time favorite with the Ontario farmer, its feeding qualities being unequalled by barley, oats or corn, and therefore it is not surprising that it should so soon regain its old place. Turnips are also in growing demand for fodder, and the average yield is already very large. Hay shows no fluctuation since the failure of the crop of 1882 (due to the up-rooting of clover by spring frosts) and the consequent increase of acreage seeded for the next year. The proportion which the produce of last year's crops bears to the average of the five years is indicated in the following table, over groups of counties and the whole Province—the average of each crop being represented by 100:

Crops.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. L. and Ottawa.	East Midland.	Northern Districts.	The Province.
Fall Wheat	102	97	64	89	73	47	107	18	88
Spring Wheat	100	92	94	82	86	102	89	64	90
Fall and Spring Wheat	101	96	76	88	79	93	95	62	89
Barley	95	94	104	94	106	88	107	122	100
Oats	103	104	116	104	103	107	114	109	106
Rye	74	83	35	62	56	41	63	59	53
Pease	157	126	113	130	126	98	123	96	123
Corn	97	87	121	85	74	81	75	71	90
Buckwheat	105	114	151	107	135	102	131	75	113
Beans	108	112	122	53	84	82	94	89	97
Hay and Clover	93	93	89	88	98	109	98	85	97
Potatoes	71	65	77	75	84	83	99	113	80
Mangel-wurzels	134	115	106	122	100	104	110	134	112
Carrots	120	84	93	91	82	96	104	100	91
Turnips	107	110	115	117	123	123	144	122	119

The wheat production last year exceeded the average of five years in the Lake Erie counties only, while for the province it was 11 per cent. less. Barley was less than the average in four groups of counties and greater in four others, but over the province it attained the average. The production of oats exceeded the average of five years by 6 per cent., of pease by 23 per cent., of buckwheat by 13 per cent., of mangel-wurzels by 12 per cent., and of turnips by 19 per cent; the production of beans and hay was less than the average by 3 per cent., of carrots by 9 per cent., of corn by 10 per cent., of potatoes by 20 per cent., and of rye by 47 per cent.

The averages of yield per acre are shown for each crop in the following table, (1) for

groups of counties last year, and (2) for the whole province in 1885 and 1886, and in the five-years period :

Field Crops.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. L. and Ottawa.	East Midland.	Northern Districts.	The Province.			
									1886.	1885.	1882-6	1882-5
Fall Wheat	20.0	22.0	18.0	21.1	18.5	20.1	25.0	16.0	20.4	24.5	21.0	21.1
Spring Wheat	14.5	13.7	16.8	14.3	17.8	17.5	16.6	15.7	16.5	11.4	16.1	16.0
Fall & Spring Wheat	19.7	20.0	17.4	19.3	18.2	17.7	18.9	15.7	18.8	18.3	19.0	19.1
Barley	25.3	28.0	26.4	28.3	26.5	25.1	25.3	23.1	26.5	27.7	26.9	27.0
Oats	39.2	36.5	35.2	38.3	36.9	33.7	34.3	32.1	36.2	35.8	37.1	37.4
Rye	15.5	21.3	16.1	19.9	14.5	18.3	16.1	19.1	16.3	16.2	16.9	16.9
Pease	22.1	24.0	23.2	24.6	22.8	19.8	22.1	20.4	22.8	21.7	21.6	21.3
Corn (in ear)	74.0	67.2	58.3	67.9	58.9	57.6	54.2	41.1	69.0	64.0	*67.9	67.6
Buckwheat	20.8	16.1	18.6	21.4	22.3	26.1	25.2	29.6	23.7	24.8	*24.0	24.1
Beans	22.4	20.9	23.9	21.2	23.1	25.9	25.0	29.4	22.9	20.1	*21.9	21.6
Potatoes	103.6	89.7	110.4	108.4	109.7	120.0	145.9	185.9	114.3	132.0	125.0	127.2
Mangel-wurzels	510.2	521.3	519.2	534.4	445.3	379.8	430.1	309.4	483.6	466.1	454.5	446.7
Carrots	339.8	376.7	411.1	418.1	380.4	308.1	372.4	267.3	375.4	383.7	402.1	379.6
Turnips	418.2	486.8	479.2	521.6	453.9	375.5	444.7	340.9	475.7	402.1	409.9	392.9
Hay and Clover	1.35	1.19	1.09	1.35	1.38	1.39	1.15	.91	1.35	1.43	1.42	1.45

* Average for the four years 1882-4-5-6.

Comparing the yield of 1886 with the yield of the period, it will be observed that it was in almost every respect an average harvest year—that is to say, the yield of each crop differs little from the average yield of the period. The average yield of five years, consequently, is nearly identical with the average of four years, as appears by comparison of the figures in the last two columns of the table ; it is in roots only that a divergency is noticeable. But to ascertain definitely what an actual average of the various field crops of the province is, we must await the results of a few more harvests. The following table gives the proportion which the yield per acre of last year's crops bears to the average of five years—the latter again being represented by 100, as in the table of total produce :

Crops.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. L. and Ottawa.	East Midland.	Northern Districts.	The Province.
Fall Wheat	101	104	82	99	85	110	119	75	97
Spring Wheat	94	96	110	94	105	101	108	85	102
Fall and Spring Wheat	101	103	94	98	94	102	112	85	99
Barley	100	101	98	98	98	99	99	95	99
Oats	103	98	100	96	96	95	102	98	98
Rye	94	128	85	120	95	99	100	94	96
Pease	108	104	103	109	106	98	109	90	105
Corn	99	108	103	98	99	109	111	106	102
Buckwheat	98	83	100	98	98	101	103	111	99
Beans	107	95	132	101	100	98	124	124	105
Hay and Clover	92	88	87	87	94	100	91	78	94
Potatoes	87	75	85	90	96	89	110	118	91
Mangel-wurzels	123	113	114	111	98	94	103	107	106
Carrots	114	97	102	104	96	90	108	100	99
Turnips	112	120	110	123	110	108	125	107	116

Here the ratio of average yield per acre, comparing last year with the period, is much closer than in the table of total product. The greatest divergence from the average is presented in potatoes and turnips, the former being 9 per cent. below and the latter 16 per cent. above it. Pease and beans are each 5 per cent. above the average, and hay and clover 6 per cent. below it; while wheat and barley are 1 per cent. and oats 2 per cent. below. In several of the groups of counties, however, the line of divergence is more irregular.

Ontario vs. American States.—A comparison of the average yield per acre of cereals in Ontario and the principal grain-growing states of the American Union is presented in the following table:*

Crops.		1886.	1885.	1884.	1883.	1882.	1882-6.
Fall Wheat.....	Ontario.....	20.4	24.5	24.0	10.6	26.3	21.0
	New York.....	16.3	15.4	16.5	10.3	15.7	14.8
	Pennsylvania..	12.7	9.7	13.6	13.2	13.6	12.6
	Ohio	15.0	10.2	15.3	10.0	15.1	13.3
	Michigan.....	16.0	19.3	16.5	14.0	16.3	16.4
	Indiana	14.8	10.6	12.5	10.4	16.5	13.0
	Illinois	13.7	8.5	11.6	10.0	17.7	12.9
	Missouri.....	13.2	7.4	11.8	10.1	11.8	10.9
	California	11.6	9.4	13.2	13.0	13.0	12.0
	Kansas	11.4	10.6	16.5	17.5	19.9	15.2
Spring Wheat	Ontario.....	16.5	11.4	20.2	16.6	16.5	16.1
	Wisconsin	11.5	11.5	14.0	12.3	14.4	12.7
	Minnesota.....	14.0	11.1	15.0	13.0	13.0	13.2
	Iowa	12.2	11.3	12.0	11.3	10.3	11.4
	Nebraska.....	11.0	11.3	14.5	15.5	11.0	12.7
	Dakota.....	11.5	12.8	14.5	16.0	15.9	14.1
Barley	Ontario.....	26.5	27.7	27.3	24.3	28.6	26.9
	New York.....	22.0	22.0	22.5	24.2	24.8	23.1
	Wisconsin	22.0	26.5	23.2	24.1	25.0	24.2
	Minnesota.....	22.0	23.8	24.2	22.9	23.3	23.4
	Iowa	22.5	23.0	22.3	21.9	22.6	22.5
	Nebraska.....	22.0	23.4	21.0	22.1	23.0	22.3
	California	22.2	18.1	23.6	16.2	16.4	19.3
Oats	Ontario.....	36.2	35.8	38.9	38.5	36.4	37.1
	New York.....	28.7	27.9	30.0	31.3	29.9	29.6
	Pennsylvania..	28.7	26.3	27.9	30.6	27.3	28.2
	Ohio	32.4	37.3	28.0	33.9	26.4	32.0
	Michigan.....	29.5	35.4	33.4	34.6	31.7	32.9
	Indiana	30.7	26.8	30.0	29.7	26.8	28.8
	Illinois	31.8	32.8	32.8	36.1	40.7	34.5
	Wisconsin	28.4	33.8	33.5	30.4	29.6	31.1
	Minnesota.....	34.4	34.9	35.2	33.1	35.7	34.6
	Iowa	34.1	33.8	36.7	34.1	31.0	34.0
	Missouri.....	23.4	22.3	26.7	28.7	30.1	26.2
	Kansas	26.4	31.8	35.0	39.4	27.0	31.9
	Nebraska.....	29.5	34.3	33.7	40.0	23.5	32.2

* The states' averages in this table have been computed from the totals of acreage and product as given in the annual reports of the United States Department of Agriculture.

For the province of Ontario as well as for the several states, the average yield is computed from returns of actual yield procured after the bulk of the grain was threshed, and to make the comparison a fair one those states have been selected in which each kind of cereal gives its best results. There are a number of other states where fall wheat is grown besides the nine for which averages are given in the table; and so also there are other states besides those in the table where spring wheat, barley and oats are grown; but the quantity of produce is, in each case, too insignificant for comparison. It will be observed that in the average of five years Ontario holds the lead throughout. Michigan, its nearest rival in fall wheat, is 4.6 bushels per acre behind our province, and Missouri's average is less than one-half of ours. In spring wheat we exceed Iowa's average by 4.7 bushels and Dakota's by 2 bushels per acre; in barley we lead California by 7.6 bushels and Wisconsin by 2.7 bushels per acre; while in oats the states' averages range from 26.2 in Missouri to 34.6 in Minnesota, against our average of 37.1 bushels per acre. Our fall wheat failed one season out of the five (1883), the result of a mid-winter rain storm and subsequent cold spell which extended over the greater portion of Ontario, western New York and all the states of the Ohio valley. Our spring wheat also failed one season out of the five (1885), the result of unfavorable weather at the ripening stage. The barley and oats crops have been more fortunate, and their yearly averages have been nearly uniform throughout the period, saving the apparent failure of oats in Missouri in two successive seasons. The record thus far, then, is decidedly in favor of the province in the growth of the great staple cereals, and fully endorses the opinion of observant men on the favoring circumstances of our situation in the circle of the great lakes.

FRUIT AND FRUIT TREES.

Vegetation in the middle of May last year was every where much more advanced than in ordinary seasons, and ten to twenty days earlier than the year before. The spring opened a little later than usual, but the genial weather without any severe frosts which prevailed after the middle of April sent vegetation forward with a bound. In the southern counties the plum, peach and cherry trees blossomed in the latter part of April, and the apple trees at the beginning of May. In higher and colder districts, as in the southern part of Grey, fourteen hundred feet above sea level, vegetation was about two weeks later, and shortly after the middle of May apple blossoms were open. Fruit prospects at the middle of May were unusually good, the trees appearing to be healthy and the display of blossoms far beyond the ordinary. The only exception was the peach, which in most districts had succumbed to the severe weather of the previous winter and promised a failure from the start. With regard to other fruits the magnificent promise of the spring was unfulfilled, owing to the unfavorable weather of the later season. The failure to realize the expectations of the spring has not been fully accounted for. Probably the chief cause was the frost, which in the middle of May, after a protracted period of warmth, affected the orchards, which were then in bloom over the greater part of the province. Where the frost was very light or not felt at all, the heavy rains in some localities about the same time may have had an unfavorable influence. Drouth is also said by many correspondents to have been injurious in the western and south-western counties, affecting not only the quantity of fruit but its growth likewise. In north-eastern Ontario the rainfall was abundant, and no complaints came from there or from central Ontario of injury through dry weather. Every year the injury done by insects is more or less serious, and generally it is very unequally distributed geographically. Last year was no exception. There was but little injury by any insect pest reported from the East Midland counties, or from anywhere east of the bay of Quinte. Westward, in many counties the harm done was so slight as to be mentioned by but few, while some growers, even in the counties most affected, reported remarkable immunity from loss through this cause. Apparently, in the Lake Huron counties insects did the most harm. The codling-moth was especially mentioned by several growers in Bruce, Huron and

Lambton. In all these counties, and in Essex, Grey and Simcoe, as well as occasionally elsewhere, the borer appears to have been at work extensively. In addition to the counties named, the counties of Kent, Wellington, Lincoln and Northumberland appear to have suffered from insect pests in not a few localities, while Halton seems to have been singularly free from injury. Although the damage arising from all these causes was very great, there was still a satisfactory yield of one or more varieties in most districts.

The majority of the reports to the Bureau indicated a comparative failure of the apple crop, more particularly of the winter varieties. This was all the more disappointing in that the promise at blossoming time was so extremely good. Numerous causes were assigned for the failure. One is the frost of May, which, as was before mentioned, did much damage in a great many counties. Insect pests, especially the apple aphis, were also numerous, no doubt receiving great encouragement from the warm weather of early May. Other correspondents mentioned a species of blight, which attacked the fruit soon after its formation, and was prevalent throughout the greater part of the province. This enemy did perhaps more than any other to lessen the crop of winter apples. Complaints were also made by many correspondents of the decay and death of apple trees, but from what causes it is not easy to ascertain. Probably the severe frosts of recent winters, alternating with mild weather, have had more effect in this way than any other agency. There is no doubt that lack of proper drainage and the want of a little attention in fall and spring have also occasioned the loss of a good many trees that should have been now in a healthy state. But even with all these adverse influences to contend against, the apple crop in many parts of the province was fairly good. In general, the trees bore most freely in the western and eastern extremities of the Province, while in the central districts there was a comparative failure. In a few localities, partly owing to the superabundance of the crop and partly to the injured condition of fruit blown down by the October storm, apples were largely fed to stock. Generally, over the counties westward of Toronto, there was more or less surplus, as also in a few counties along Lake Ontario. In the Lake Huron and Lake Erie counties, thousands of barrels were shipped to England. Prices were rather low, though profitable ; a common price reported in November in several localities in the Erie, Huron and West Midland counties being one dollar per barrel, though quotations of apples were given as low as ten cents per bushel. The demand was very good in many counties, while in others sales were slow even at very low prices. In the St. Lawrence and Ottawa counties the orchard area, except in a few townships, is not sufficiently large at any time to supply the local demand. In Leeds and Grenville the crop was fairly good ; in the other St. Lawrence counties reports were less favorable. In Lanark, Carleton and Renfrew the orchards bore well, but, as is always the case, there was no surplus, excepting a small one in a few townships. The Ottawa counties had little loss of apples from any cause, and the trees were generally in sound condition. In the East Midland counties the crop varied much. In the extreme north of Hastings the few trees grown apparently did well ; in the southern townships, along the Bay of Quinté, where the apple area is large, there was a small surplus, but the county as a whole had a crop probably a little short of its own requirements. In Peterboro' and Victoria the crop differed much in quality, the yield being good in some townships and poor in others. Blight affected many orchards, and though some localities had a good surplus these counties as a whole had not sufficient for home consumption. In Haliburton the yield was encouraging to local growers. The wind storm of October generally did little damage, excepting in the southern parts of Peterboro' and Victoria. In the Lake Ontario counties the crop was below the average in quality, and in several of the eastern counties of the group it was rather inferior in quality. Spottedness was referred to by several correspondents, and along the St. Lawrence many apples, especially of the sour varieties, were scabby. Injury by insects occurred in several localities, but Ontario, York, Peel and Halton generally suffered least from this cause. Little reference was made in Lincoln to damage by the October storm, but in all the other counties many orchards lost much fruit. There was, however, in each of the counties a surplus of apples, though in Lincoln, Prince Edward and Ontario there was little more than enough for home consumption. In Northumberland, despite scab, blight, insects, wind and a poor crop, the more easterly townships shipped many apples to England. York did not

lose much by insect pests, although the crop was decidedly below an average. But here, as in Peel and Halton, a surplus remained for sale elsewhere. In Prince Edward the trees were healthy, almost the only drawback being the damage done by the storms of October and March. In Lincoln they appeared to be less promising than in any other county along the lake. In Wentworth, York, Ontario and Durham the condition was fair, although complaints were made here and there of trees dying out. In some localities in Peel and Halton the trees were not doing well, but generally they were in good condition. In all the West Midland counties the apple crop was a fair one, and except in Dufferin, where the orchards are young, there was more or less surplus for market. In these counties the injury from insects was generally small, but from blight or some other cause localities in Waterloo, Wellington, Perth and Oxford lost many trees. The October wind storm in all these counties diminished the marketable crop, and large quantities of damaged apples were fit only for cider or for feeding to hogs. In parts of Waterloo cider apples sold at 10 to 15 cents and winter apples at 25 to 38 cents per bag, and in Middlesex at $1 per barrel, a sufficient indication of the plentifulness of fruit. The condition of fruit trees is usually fair and in many places decidedly good, excepting amongst orchards which showed evidences of blight. The Lake Erie counties had a large apple crop, especially in Norfolk and westward, and the condition of the trees, despite injury by insects and damage done by the storms, was good. In Elgin and Norfolk, especially, the trees were in a flourishing condition. In Elgin, Norfolk and Haldimand apples sold at one dollar per barrel delivered at the railway. The Lake Huron counties, especially Lambton and Huron, had a large crop and thousands of barrels were shipped from some localities for the English market. Prices unfortunately were not high. In Sombra, in Lambton, ten cents per bushel was the price quoted in November, and in several places very good apples sold at brisk demand for one dollar per barrel. In many localities in these counties insects, drouth and blight all did considerable damage, and the injury done by the storms was general and severe. The trees, however, were in good condition. In the Georgian Bay counties the apple trees have not done nearly so well as along Lakes Huron and Erie. In Simcoe the yield by healthy trees was generally good, but the injury done by insects and especially by blight left the county with scarcely enough fruit for its own requirments. The loss to growers through trees dying was exceptionally severe. In Grey the yield was good and there was a small surplus in many localities. Insects, blight and wind did damage, but trees that survived the borer and blight are looking healthy. In Parry Sound and Muskoka many trees are dying from winter injury, though there are encouraging reports from some correspondents. Duchess of Oldenburg and Tetofsky apples are mentioned as very successful, and these and other varieties that have stood the test of the last few winters are doing well. The supply of fruit, of course, is very short, except in a very few localities.

Pear trees have suffered from the same influences that affect the apple tree, and to a larger extent, owing to their greater tenderness. Pear blight continued its ravages last year, though with less severity, apparently, than in recent years. Such pear trees as survived the blight and other enemies bore well last season, and a considerable surplus was shipped from many localities in the Lake Huron and Lake Erie counties, from the Niagara district, and occasionally from places in Grey, the West Midland and Lake Ontario counties eastward to the Bay of Quinté. In all parts of the province pear trees were productive, and, except such as were injured previous to last year, they look thriving. The quince crop was a very good one, but its area is small.

The peach crop was again a failure, many trees having been killed out, apparently by causes similar to those affecting the apple trees, and the freezing of the fruit buds by the previous winter's exceptional frost. Few peaches were gathered in any of the Midland counties, and not many in most of the counties along Lake Erie or in the Niagara district. The only localities reporting a surplus are in Essex and Kent, and in the neighborhood of Niagara. Generally in what are the best peach growing districts the crop was much short of local demands. The trees, however, looked thrifty and hopes were entertained of better results in coming years.

Black-knot had before last year destroyed most of the plum and cherry trees over large sections of the province, and during the past season continued its destructive work,

though probably with diminished effect. It appears doubtful whether the disease will disappear till affected trees are rooted up or destroyed, and after a lapse of time new plantations are set out. Cherries and plums, wherever the trees had survived the black-knot, were last year a heavy crop; and many localities in the Lake Huron and other western counties, as well as some in eastern Ontario, report a good surplus of plums.

The grape sustained its reputation as being one of the surest, hardiest and most profitable of Ontario's fruits. Last year it was remarkably free from mildew, rot, or injury of any nature. The varieties adapted to local climate ripened well from the Ottawa to the Detroit, and the yield was very large, with an immense surplus in the districts where vine growing is extensively followed.

Strawberries and berries of nearly every species bore abundantly, and the usual centres of berry cultivation had a large surplus for the city and town markets.

The following table gives an approximate statement of the acreage devoted to orchard and garden purposes for the past four years:

Districts.	1886.	1885.	1884.	1883.
Lake Erie	39,028	39,844	39,952	40,084
Lake Huron	19,946	19,925	19,952	19,907
Georgian Bay	11,097	11,555	11,577	12,228
West Midland	38,304	40,593	41,628	42,800
Lake Ontario	56,622	56,796	55,112	57,358
St. Lawrence and Ottawa	12,375	13,145	14,320	14,760
East Midland	8,635	8,838	9,780	9,950
Northern Districts	609	570	516	363
Totals	186,616	191,266	192,837	197,450

This table, which is based on the returns of the assessors for the various years, shows a slight decrease in the acreage devoted to fruit culture. It is most likely, however, that the variation is caused more by the varying estimates of different occupants of farms, for circumstances would tend to show that farmers are now paying more attention to fruit culture than ever before. It may be the case that in a number of instances exhausted orchards have not yet been replaced by new ones, but, as has been pointed out in previous reports, the apparent decrease is more probably due to the free and easy estimates which farmers generally place on their orchard acreage.

FROM THE MAY REPORT.

Wm. McCormick, Pelee Island, Essex: All the fruit trees have a good appearance, and suffered very little during the winter.

W. McKenzie Ross, Harwich, Kent: The apple trees are in full bloom (10th May) and never was the show so good. Peaches will be a fair crop. Plums are formed, and every tree is loaded. Cherries are also loaded with fruit.

A. J. C. Shaw, Camden, Kent: Vegetation is about ten days earlier than in an average season. The prospects are good for apple, cherry and small fruits. There are no peaches or plums in this locality. There is no appearance of damage from winter frosts.

George Green, Chatham, Kent: The apple, plum and cherry trees are one mass of blossoms. Peach trees were nearly all killed or severely injured by frost.

J. W. Howey, Bayham, Elgin: Apple, plum and cherry trees are full of blossoms, but a great many plum and cherry trees have been destroyed by black knot. Peach trees have hardly any blossoms, and some trees are dead.

Herbert Kitchen, Townsend, Norfolk: Apple, plum, cherry and pear trees are looking and blossoming well, but peach trees look bad and have no blossoms. No fruit trees appear to have been affected by the winter but the peach trees, and they may come on better later.

William Meharg, Houghton, Norfolk: Grass and forest vegetation is two weeks ahead of last year. Apples and peaches are making a splendid appearance. Plums along the lake shore in Houghton look well. Cherry trees are all cut down on account of the black knot, and there will be but very few cherries. Winter has not affected fruit trees.

John H. Houser, Canborough, Haldimand: Grass is a month earlier than last year. The apple is ready to bloom, and the peach, plum and cherry are all in blossom. The winter has been favourable for fruit.

John Senn, Oneida, Haldimand: Apples are in prime condition. Plum and cherry trees affected by black knot.

John McIntyre, Crowland, Welland: Apple and cherry trees are in good condition; peaches not so favourable.

Andrew Childs, Dawn, Lambton: Last year there was an unusually heavy crop of apples in this locality; this season, although there will not be a heavy yield, blossoms indicate that there will be enough for home use. Cherry, pear and plum trees blossomed well, the former profusely.

James Watson, Moore, Lambton: Apple trees look healthy, and notwithstanding the heavy crop last year are covered with blossoms, except the trees that were overloaded. Cherry and plums tree are rich in blossom; peaches are sickly and have no blossoms, but on our clay soils few peaches are cultivated.

Alexander McD. Allan, Goderich, Huron: Further advanced than I have ever known at this season: a large fruit crop is promised. Winter has done very little damage along the lake shore; peach trees are well in bloom and the winter did them no injury.

Frank Morley, Usborne, Huron: Forest trees are almost in full leaf; apple and cherry trees are looking well and full of bloom, especially on early kinds of apples. No peaches are grown, and plums are not much grown, but are looking well where not affected with black knot. The winter did no damage at all.

Thomas Fraser, Huron, Bruce: There is a splendid show for apples, peaches and cherries; plums were an extra crop last year and many trees are resting this year. The winter did no harm to fruit trees.

James Weatherhead, Lindsay, Bruce: Fruit trees have not a good appearance; the winter frost hurt them.

R. Gillies, Sullivan, Grey: Wild plum trees were in full bloom on 2nd May, being nineteen days earlier than last year, and four days earlier than in thirty years here.

John Booth, Normanby, Grey: Fruit trees of all kinds look well. Some young fruit trees were frozen around the stem at snow line by frequent thaws succeeded by hard frosts.

George Binnie, Glenelg, Grey: Apple trees look well, and carry a large show of blossom. There is scarcely a plum tree left in the whole district; the black knot has taken them all. Cherries and small fruit promise a large yield; all seem to have wintered well.

Geo. Sneath, Vespra, Simcoe: Grass and forest vegetation is unusually forward; the forest trees were out in leaf on the 1st of May. Apple trees are in full blossom (15th May), with prospect of a large crop of apples. The fruit is just setting on plum and cherry trees.

Geo. Cowan, Innisfil, Simcoe: Trees are leafing out in the bush; apples are just coming into blossom; the plum is in full bloom and the cherry also; not many trees are killed; they stood the winter better than last year; there are a great many lice on leaves and buds.

C. A. O'Malley, vicinity of Wardsville, Middlesex: Fruit trees are loaded with blossoms, except peach trees, many old ones being finished during the winter and all the blossom buds completely killed on the young trees which survived.

Wm. Watcher, Dorchester, N. Middlesex: I never saw better prospects for apples, cherries and plums; all are entirely covered with blossom; the winter has had no bad effect on fruit trees whatever. There was a heavy frost last night which, I fear, has done some damage to fruit.

Wm. Jamieson, Westminster, Middlesex: As heavy a show of blossoms as I ever remember seeing, the peach and plum excepted; the plum of late years became so diseased as to necessitate cutting down, and few seem to care for replanting, and the peach is little cultivated. No injury was done by the winter.

R. Coad, Ekfrid, Middlesex: There is a fair amount of blossoms on apple trees which did not bear last year. The peach blossoms were all killed by the cold snap of 5th February. I suppose curculio takes the whole plum crop. The cherry is crowded with blossoms; other sorts of fruit are fairly well.

D. S. Butterfield, North Norwich, Oxford: Apples, pears and early cherries are blossoming very full. The winter killed all the peach blossom.

W. M. Ryan, Dereham, Oxford: I have never seen a better prospect for apples. The others have been cut down to a large extent on account of black knot.

Henry Key, Oakland, Brant: Grass at this date is somewhat backward. Apples and cherries are showing a very large quantity of blossoms and are looking healthy and promising. Peaches and plums are nearly all destroyed.

C. Jarvis, Brantford, Brant: In my 42 years' experience in Canada there has not been such a show for fruit as now.

Wm. Courtice, Fullarton, Perth: All fruit looks rather promising if not injured by frost. The plum trees were all (or nearly so) destroyed by black knot some years ago.

Thomas Maguire, Wallace, Perth: Vegetation is far advanced for the season, fully 15 days in advance of last season. Apple, plum, cherry and pear trees are covered with blossom, just opening out. No damage was done by winter. This was an excellent plum country 10 or 15 years ago, but from blight, cold winters, or some other cause, the best varieties of plum trees nearly all died; what few are left look well. The wild red plum has done best; the best varieties are very good and supply the want tolerably well.

Robert Cromar, Pilkington, Wellington: Plum trees are now in full blossom and very heavy.

James Cross, Peel, Wellington: Apple trees look well, almost in bloom. The plum is good; the common cherry trees are not worth anything with black knot. The winter has had no bad effect on trees.

Richard Blain, North Dumfries, Waterloo: Grass and forest vegetation is fully three weeks ahead of this time last year, and I think fully 10 days ahead of the usual season. Apple trees are all looking well. Plum, peach and cherry have been badly spoiled here for two or three years; the cherry in particular is nearly destroyed.

Alex. Rannie, Wellesley, Waterloo: There is a good appearance of apples and pears at present. Plums and cherries are almost gone with black knot.

James Reith, Luther E., Dufferin: Apples appear to have stood this winter very well; very few trees have gone back and the appearance in fruit is very good. There are no plum trees. Some cherry trees are left, but black knot seems to be carrying them off.

Matthew G. Varcoe, Amaranth, Dufferin: The blossom is coming out on all kinds of fruit trees, and appears to be very thick. No injury was sustained from the winter, except a very slight damage from ice which stuck to branches and broke some very old trees.

Robt. Shearer, Niagara, Lincoln: Vegetation is at least ten days earlier than last year at this date. Apples promise finely; peaches are unequal, owing partly to varieties and partly to locality; plums have bloomed well and the promise is good; cherries are very fine; pears the same. All have stood the winter well, except peaches on exposed or low situations.

Robert N. Ball, Niagara, Lincoln: Peaches promise a fair crop; other fruits an abundant one. The winter has not hurt fruit.

J. R. Snure, Louth, Lincoln: All fruits excepting the peach promise an abundant harvest. The winter killed nearly all the peach blossom and many of the trees.

Geo. Walker, Clinton, Lincoln: Fruit trees, except the peach, promises an abundant crop. The cold winter has destroyed the peach crop.

J. W. Van Duzer, Grimsby, N., Lincoln: Grass and vegetation are advanced two weeks ahead of last year. The apple, plum and cherry trees are very full of bloom. Peaches were all killed by the winter.

Robert Inksetter, Beverley, Wentworth: Vegetation is very forward. Apples and pears at present bid fair for a great crop. Peach and cherry trees are nearly all dead, and a good many plums are also dead.

E. D. Smith, Saltfleet, Wentworth: Plums and cherries are in blossom, and peaches also where there are fruit buds to blossom. Apples are not in bloom yet. All fruit promises well at present except peaches, which are a complete failure, scarcely a fruit bud escaping the cold winter.

M. Clements, Trafalgar, Halton: The grass and forest trees are fully one week ahead of the average season. Apple, peach, plum and cherry trees are in fine condition and are now in full blossom; they have not been injured by the winter.

W. T. Pattullo, Caledon, Peel: Apple blossoms are nearly out with an abundant appearance. No peaches, and but few cherries are grown; plums are well filled with blossoms; the winter has been very favourable for fruit trees.

Thomas Scott, North Gwillimbury, York: Apple trees stood the winter well; plum and cherry trees will soon be all killed by black knot.

George Evans, jr., Georgina, York: Grass and forest vegetation is about a week earlier than usual. A great many apple trees die every year; they get black in the heart, and this year appears to be no exception. Plum and cherry trees suffer greatly from black knot. The winter has not seriously affected fruit trees.

George Elliott, Scarboro', York: The apple, plum and cherry trees are very full of bloom at present; no damage from winter.

Joseph Monkhouse, Pickering, Ontario: Plum trees are full of blossom; not many cherries. Apples are not in blossom yet, but looking very well, with appearance of a great amount of blossom. Trees have been very slightly affected by winter.

Thomas Cain, Scott, Ontario: Apple trees look well; plum and cherry trees in this part are mostly destroyed by black knot.

H. A. Walker, Hope, Durham: Apples are very good, but plums and cherries have all been killed by black knot.

Robert Hodge, sr., Clarke, Durham: The apple, plum and cherry trees seem to be nearly up to the average of other good years, and do not appear to have suffered from the winter.

George Sanderson, Cramahe, Northumberland: The apple blossoms are beginning to show; plums are blossoming; cherry trees are nearly all killed by black knot.

William Macklin, Haldimand, Northumberland: The apple prospect is very good; the plum has but few blossoms; cherry trees look poor; pear blossoms are scanty, and the Bartlett pear trees were injured by winter frosts.

Louis P. Hubbs, Hillier, Prince Edward: All kinds of fruit are in full bloom; the only damage done in winter was by mice girdling apple trees.

James Benson, Ameliasburg, Prince Edward: Apple trees have come though the winter well, but do not promise to be heavily blossomed. The same may be said of peach trees. Winter did no harm. The plum of late years has been a failure.

P. W. Miller, Kaladar, Lennox and Addington: Vegetation is about two weeks in advance of last year, fruit trees white with blossom. There are some dead limbs through the ice freezing on them.

C. R. Allison, South Fredericksburg, Lennox and Addington: The appearance of apples is only middling; I think the severe cold winter injured the best. Plums and cherries have the appearance of being a very light crop, though there is generally a good supply in this part.

Joshua Knight, Storrington, Frontenac: Grass and forest vegetation are as forward as sometimes at the 1st of June. Apples and plums are in bloom, and with good indication of a full crop. Trees appear uninjured by winter. The black knot has killed all the cherry trees.

John Elkington, M.D., Palmerston, Frontenac: Grass is very forward; it was green when the snow left; there was a bite for cattle the third week in April. Forest and orchard trees alike suffered severely from the great ice storm (date not preserved); an avenue of Lombardy poplars on my place is almost ruined. Kentish cherry trees seven inches through were broken to the ground; maple trees were badly broken so that no sugar was made; the sap ran from the tops like continuous rain; the forest for miles is strewn with broken limbs, tops and trunks. Great elms were broken off and twisted into most fantastical shapes. Statute labour was called out all along the Mississippi and cross roads.

John C. Stafford, rear of Leeds and Lansdowne, Leeds: Apples and plums are in blossom: all have stood the winter well, except the cherry, which, for some cause or other, is dying out.

Alexander Buchanan, South Gower, Grenville: As yet all fruit trees, large and small, look very well indeed; they have taken no harm in any respect from the winter.

G. D. Dixon, Matilda, Dundas: Fruit trees promise an abundant harvest; they came through the winter in fine condition.

James Clark, Kenyon, Glengarry: Grass is short yet, although of good colour; the forest is half leaved out; apple trees have a good appearance, and plums are in full blossom; fruit trees wintered all right.

James Surch, Plantagenet South, Prescott: Grass is sprouting sufficient for sheep, but not long enough for cattle. Forest trees are well budded; the plum is in full blossom; the apple is commencing to blossom; I don't see any injury to the apple trees from the winter.

Paul Labrosse, Hawkesbury East, Prescott: Grass is about six inches out of the ground; fruit trees are in full blossom and have a very good appearance; they were not damaged by the winter.

P. E. Bucke, Ottawa, Carleton: Vegetation is well advanced for the season, which is from ten days to two weeks earlier than last year; the foliage of the earlier varieties of forest trees is almost expanded; pasture and meadow lands have passed through the winter well, the loss from winter-killing being very light. The prospect of the apple, plum and cherry crop is grand; on no previous occasion have trees and plants been known to pass through winter so well. There have been no spring frosts or cold rains to check the fertilization of the blossoms; both winter and spring have been favourable for all kinds of fruit.

J. J. Smyth, Gloucester, Carleton: Plums are in full bloom; apples in bloom bud; peach and cherries are not grown here. Trees were not injured to any extent, except by a heavy sleet in March, which broke a few limbs.

Joseph Kinder, Brudenell, Renfrew: Apple and other fruit trees have not been injured by frost, but an accumulation of ice on the boughs occurred once in spring which broke down some branches.

H. A. Schultz, Sabastopol, Renfrew: Apple trees look well; they are in full bloom now; of plum and cherry we have only the wild kinds; winter did not affect fruit trees in the least.

R. Harper, Elmsley North, Lanark: Plum trees are going out of blossom; they blossomed a week earlier than usual; apple trees are coming into blossom.

John M. Cleland, Darling, Lanark: Fruit trees are all looking well; the trees were not injured by winter, except this spring, were somewhat broken by the heavy load of ice frozen on by the storm of 19th and 20th of March.

Thomas Beall, Ops, Victoria: Apple, pear, plum and cherry trees are now in full bloom, and promise the most abundant crop ever known in this section. Small fruit—grapes, currants, gooseberries, raspberries, blackberries and strawberries, are all equally promising.

Hugh Caldwell, Chandos, Peterboro': The cherry and plum trees are in full bloom; the apple is well budded. I have never seen a better promise of fruit. No injury was done by the winter.

F. Birdsall, Asphodel, Peterboro': Apples were coming into bloom 15th May; wild plums on the 1st May; cherry trees came into bloom on the 12th May. The winter has not done any damage.

W. C. Melville, Stanhope, Haliburton: Fruit trees are in good condition and wintered very well, except that an ice storm did considerable damage.

John Wilson, Dungannon, Hastings: Apples and red plums very good; other sorts bad; many of the trees are dead; I cannot tell the reason. They stood the winter well till March, but at the breaking up of winter we had rain with frost which covered the trees with ice, which broke many boughs off both fruit and bush trees.

Anson Latta, Thurlow, Hastings: Grass and forest vegetation are very forward, beyond anything I have seen for years. Apple, peach, plum and cherry trees are very full of blossoms. The winter has not affected them in the least.

J. C. Hanley, Tyendinaga, Hastings: The apple is forming blossom, and the cherry, plum, etc., in height of bloom. The trees have not been materially injured by winter. Cherry trees are fast being cut down on account of black knot.

A. Wiancko, Morrison, Muskoka: Grass grows well; clover—except some Alsike in sheltered places—s almost totally destroyed. Apple trees are in blossom and promising a good crop; no other fruit trees grow here; the winter has killed most of the young trees planted last spring.

Albert H. Smith, Monck, Muskoka: A great many apple trees are dead. Crabs are well loaded, the blossoms almost in flower. Wild plums are in full bloom and the flowers seems to cling better than usual. Small fruits are good.

F. W. Ashdown, Humphrey, Parry Sound: Grass is growing nicely but is in want of rain. Trees are leafing out. Apples are just breaking bud with promise of a good crop of fruit. No harm was done by the winter.

H. Armstrong, McKellar, Parry Sound: Fruit trees are vigorous, but I can speak only of apples. Winter did no injury.

John Ingram, Assiginack, Algoma: The winter damaged grass and fruit trees.

FROM THE AUGUST REPORT.

A. W. Cohoe, Rochester, Essex: Fruit trees are healthy, except that the black knot has appeared in a few instances on cherry trees. Fruit of all kinds is a good crop, though perhaps not quite as large as some former seasons, otherwise a good quality.

R. C. Taylor, W. Tilbury, Essex: Apples almost drying on the trees. Pears good, having tap or long centre root, they stand drouth better; a good crop; the best I have seen here in twenty-three years; grapes a fair crop. Other small fruit below medium; fruit will be scarce, quality not good.

Sam. Russell, Orford, Kent: Apples, pears, peaches and cherries in abundance. The peach crop promises much above the average; but few plums grown here. Grapes and all small fruit good and plentiful, though the small fruits suffered a little for want of rain toward the end of the season. Peaches are selling at $2 per bushel.

John Haggan, Malahide, Elgin: In some localities, a blight appeared among apple trees in the month of June, a number that blossomed and looked well, suddenly withered and died without any apparent cause. The blight appeared only to affect a few trees in the orchard; the rest looking very thrifty.

John Machon, Charlotteville, Norfolk: Apples good crop, not much grown hereabouts; peaches total failure; plums not generally grown hereabouts; cherries, grapes and all small fruits in abundance and of very good quality; strawberries as low as three cents a basket; raspberries four cents per quart; cherries three cents per quart, in fact, large quantities have been left on the trees. The apple trees are getting more or less affected by some kind of blight, some of the limbs dying, commencing at the ends.

John Senn, Oneida, Haldimand: Trees look well but not much fruit. Pears, peaches and plums not very heavily loaded; they were winter-killed. The black knot badly injured the plums and cherries; grapes promise an abundant crop, small fruit plentiful. There is a sufficiency of fruit, and of fair quality.

C. Riselay, Bertie, Welland: Fruit trees are looking well generally; apple and pear crop will be about an average; no peaches and very few plums. Cherries and grapes about an average crop; other small fruits plentiful. There is likely to be a sufficiency of fruit of fairly good quality.

J. H. Patterson, Dawn, Lambton: We are passing through an unusually dry season for this part of Ontario, and it is affecting fruits to some extent. Apples bloomed freely, but much of the young fruit is dropping off, the trees appear thrifty. Pears and peaches are a failure here; cherries were plentiful, and grapes promise tolerably well. Currants and berries are a fair crop. There will be about enough fruit for local consumption.

G. E. Cresswell. Tuckersmith, Huron: Apple trees look healthy; rather less than an average crop. Pears look healthy; about an average crop. Peach and plum trees are badly affected by black knot and curculio, few grown, however; from above causes, crop will be very poor. Cherries have been injured to a large extent by an aphis causing the leaf to curl up and the fruit to shrivel, the aphis being similar in appearance to that which attacked the Snowball tree or Guelder rose. Grapes injured by early frost; however, a new crop of leaves and fruit has set in. Small fruits, abundant crop; plenty for home consumption; quality fair.

Alex. McD. Allan, Goderich, Huron: The prospect is for a large crop of apples, considerably over the average; late frost, however, had the effect of spotting the fruit to some extent. Snow apples will likely be badly damaged by fungus spotting this season. Pears will be a large crop; no peaches grown here, excepting a few by mere amateurs; the crop being so uncertain does not pay, and growers have gone out of the cultivation of peaches. Plums will be fully as large a crop as last year, possibly larger. Cherries bloomed very heavily and set well, but many complain that the entire crop of the finer kinds has been destroyed by a small louse or aphis shortly after the fruit set. It did not affect the Early Richmond or May Duke; I had it on the others and it seemed to be worst on the Black Eagle, Reine Hortense and Elton, but I got rid of it easily by syringing the affected parts with water and carbolic acid, (a couple of table-spoonsful to a pail of water), and now I am gathering the finest crop of cherries of all kinds I ever grew, both in quantity and quality. Grapes are a full average crop along the lake shore, but inland they were cut off in many sections just as the bloom appeared. As usual there is a large crop of all small fruits. There is a large overplus of apples for export; the crop of pears, plums and cherries is more than enough for home consumption, and the quality of all fruits is good. The plum curculio is evidently disappearing, but the codling moth is about as abundant as ever; if growers would unite in action against such enemies they would be comparatively easily overcome. I had to destroy robins and cherry birds to save my crop of cherries; they are worse enemies to the cherry-grower than the curculio to the plum-grower.

J. B. Ritchie, Greenock, Bruce: I have been considerably round this section of country and observe a great deal of decay among fruit trees. Orchards of about twenty-five years' standing are showing marked signs of decay; I believe it is caused by the extreme frost.

Benjamin Shirreff, Amabel, Bruce: Fruit of all kinds injured by spring frosts. Prospects at present enough for home use; not much more. Free from insects as far as I know.

John Mackenzie, Sarawak, Grey: Apples generally are a light crop; great profusion of blossom, but young fruit fell off about fifty per cent. of crop. Pears good yield, one hundred per cent. Peaches are not a success every year here; trees only just recovering from frosts of winter of 1884-85. Plums are small crop; cherries, good large crop; small fruits plentiful. There will be plenty of fruit for home use and some small quantity of apples and plums to ship.

George Sneath, Vespra, Simcoe: There will be a fairly good apple crop, but not so large as last year. Late frosts killed pear and plum blossoms; none left. Only a poor crop of cherries. Small fruits have yielded a good crop, but not so large as last year. There will be a scarcity of plums and pears, but plenty of apples.

F. Malcolm, Blandford, Oxford: Apples promised an abundant crop last spring, but a great deal of the fruit has dropped off; trees are in a healthy condition. English cherries have become obsolete; trees that bore a few years ago now refuse; common cherries are much affected by black-knot or something similar. Few grapes; injured by June frost; raspberries half a crop, on account of drouth.

C. Jarvis, Brantford, Brant: I can only treat of fruit in this section and will begin with cherries. The black insect has been destructive to many trees and killed some of mine at any rate. A flourishing beginning; the fruit half grown when the pest struck the tip of every branch and it is quite dead. In another the cherries were abundant: fruit, Black-heart, but growth retarded: the cherries though black have but little flavor and only two-thirds their normal size, others not so bad but struck: none of the common injured. Apples, I should judge, to be rather below average; pears fair supply, but far less than the blossoms indicated; peaches, none; plums, a good crop but much diminished by the curculio, and Moore's Arctic was no exception. Grapes quite abundant though not well set; bunches will be small, not so the berry, which is filling out well. Black currants struck for the first time and leaves turned almost black, the berry will ripen but remain small, and I think not of full flavor. On the whole, we are not badly off for fruit. The black knot in plums and cherries (common) is hard to subdue; though I have cut it off close twice a year it has beaten me and they are nearly dead; I shall grub two of them up.—P.S.—Since writing the above the severe hail storm has damaged the grapes very much; one-third of the berries on many bunches split open, and are now red and dried up; however, there are plenty left.

Charles Nicklin, Pilkington, Wellington: Apples are now the only fruit of any account we have in this part, black knot having destroyed plums and cherries. Gooseberries and currants have fruited well this season, still there is not a sufficiency, simply because farmers have not given sufficient attention to their culture yet. They are on the increase and will have to take the place of cherries and plums.

Levi Witmer, Waterloo, Waterloo: Fruit trees all suffering more or less from drouth. Apples will be below the average; quality inferior; pears, very few trees in this locality; peaches, none; cherries a good crop from the trees that are left; small fruit a good crop, equal to the demand. Altogether the fruit will not be equal to the demand in this locality.

W. B. Rittenhouse, Clinton, Lincoln: Apples will only be a medium crop; trees in good condition; pear trees in bad condition generally; crop below average. Peach trees looking bad; many dead; no fruit this season; plum trees in fair condition, medium crop; cherries, common trees in very good condition while fancy kinds are not; crop generally was good; grapes good condition and promise well. Small fruit very plentiful. There is a sufficiency of fruit; quality fair.

Colin Cameron, Nassagaweya, Halton: The prospects for fruit are better than last year. There are quite a number of apples on the trees at present, and the trees appear to be healthy and thriving well. Pears are an average crop; no peaches grown. Plums, a failure owing to the black knot and curculio. No cherries owing to the black knot which has taken possession of the trees. Scarcely any grapes grown; any amount of small fruit. There will be plenty of apples, but some of them are badly covered with black marks.

Robt. Hodge, sr., Clarke, Durham: Apples are going to be a short crop in this township. The young fruit dropped off in large quantities. Raspberries and strawberries were very good; plums very scarce; cherries a fair, moderate crop; pears a short crop.

Platt Hinman, Haldimand, Northumberland: Fruit trees seem healthy, but trees that were filled with blossoms are almost destitute of frut. Apples, scarce and some commencing to crack; pears, a very light crop; peaches, none; plums but few. The curculio has been bad; cherries, most trees black-knotted, a very light crop; grapes, fair promise, vines looking well. Have seen a little mildew.

A. J. File, M.D., Ameliasburgh, Prince Edward: Fruit trees are acquiring a good growth but the fruit is very deficient. Of apples it is thought there will be very few suitable for export; very few pears, and I might say no plums or cherries. Many plum trees are dying. Small fruits were more plentiful, but not a full crop except strawberries, which were abundant. There will probably be sufficient apples to supply the local demand, but of poor quality owing to codlin moth and black spots.

Geo. Lott, Richmond, Lennox and Addington: Apple trees are in fine condition and the crop is an abundant one. The pear is little grown; peaches, none grown. The condition and promise of the plum is good; cherries, little grown and those very poor; grapes, poor; an abundant crop of small fruit. There will be a plentiful supply of fruit of a good quality.

A. Harkness, Matilda, Dundas: Fruit trees are looking well, but apples, the principal fruit crop, are not very abundant, and the Fameuse are spotted, *i.e.*, covered with black spots or scabs, making the quality poor. Small fruits were very abundant and of good quality.

Wm. McClintock, E. Hawkesbury, Prescott: Apples and plums are the only kinds of large fruit raised here. There appears to be an average amount of fruit on the trees but of smaller size than usual. In passing through the country I see a number of trees with withered limbs as if they had been struck by lightning.

P. E. Bucke, Ottawa, Carleton: The yield of fruit as a rule has been good, but the promise of a large yield in grapes will not be realised, many varieties not having set half a crop whilst others are well loaded. Trees and vines are in fine condition and insect pest not so persistent as usual. Early apples will be a fair crop where grown. July was cold, and the advance made in crops by the early, warm spring weather has not been sustained, so that on the whole the season about keeps pace with the average for ripening purposes. There will, as usual, be scarcity of winter apples. The grape crop will be short of the demands; many vineyardists here are going into the manufacture of wine.

A. F. Stewart, Beckwith, Lanark: Apples and plums are, generally speaking, all that are grown in this locality. A fair average crop; sufficient for home use.

Chas. R. Stewart, Dysart, etc., Haliburton: Can't say anything about fruit. My apple trees have been a beastly failure; I am disgusted and disgruntled with the whole affair.

FROM THE NOVEMBER REPORT.

Robert Manery, Mersea, Essex: We have had a very large surplus of apples and peaches. Insects have not hurt the crop to any great extent.

Reuben C. Taylor, West Tilbury, Essex: Drouth has injured some trees and the wind storm of October 14-15 blew some down and split others. The loss by birds is pretty heavy,—probably 10 per cent.; there is not enough fruit for home use.

John Buckland, Gosfield, Essex: Fruit trees are in good condition. The fruit is always more or less injured by the worms. The wind storm has injured fruit trees considerably. There is a large surplus of fruit.

George Little, Sandwich East, Essex: There was a very good supply of apples about picking time, when there came a great storm of wind and blew them all off the trees.

A. M. Wigle & Son, Gosfield, Essex: Fruit trees in good condition. A great loss of fruit occurred through the wind storm of October 14th. There is a surplus of apples, pears, quinces, peaches and grapes.

John Wright, Dover, Kent: Fruit trees are good for so dry a season. Cherry and plum trees were overrun by insects, which ate the leaves. The crop was injured about 50 per cent. from some cause. There have been large shipments of apples from here. The Baldwins and Snows are very much spotted.

Francis Gifford, Camden, Kent: Fruit trees are good but were injured somewhat by the late wind storm. There is abundance of fruit—in fact it is going to waste.

W. McKenzie Ross, Harwich, Kent: No injury from insects. Neither blight nor frost has done harm and we have plenty of fruit and to spare. Apples, cherries, pears and small fruit have all been in superabundance.

Edmund B. Harrison, Howard, Kent: There has been less than the usual damage by insects, but the storm of the 14th blew all the winter and autumn apples away. Apples unless evaporated or dried will be very scarce.

J. G. Stewart, Raleigh, Kent: All fruit trees are good except the plum, which was injured by black knot. There was a surplus of apples, grapes, peaches and cherries.

George Russell, Yarmouth, Elgin: A great deal of choice fruit that would have been hand-picked, was blown off by the storm of October 14th. Apples, in fact all kinds of fruit, have been abundant.

Jabel Robinson, Southwold, Elgin: The wind storm of the 14th blew down a great many old apple trees and in many places all the apples. Apples are abundant and large quantities are being shipped to Liverpool.

George A. Marlatt, Bayham, Elgin: Apples are very plentiful. The best winter apples, picked, are worth $1 per barrel delivered at the cars. There has been a surplus of cherries.

Dugald Campbell, Dunwich, Elgin: Fruit trees are all right. I do not remember a season when less injury was done to fruit or fruit trees by insects, blights, storms or frost. There is a surplus of apples, pears, cherries, and all kinds of small fruits. Small fruits were a drug on our markets.

L. M. Brown, South Dorchester, Elgin: Shippers pay $1 per bbl. for winter apples.

James McKnight, Windham, Norfolk: There has been quite a loss by blight and insects, but worse than all, the wind storm of the 14th Octobr.

Robt. Watson, Windham, Norfolk: Fruit trees better this fall than for many years. No loss by insects, blight or frost, but the storm spoiled a great many apples for shipping. There is an abundance of fruit, and surplus of apples, quinces, and small fruit.

Wm. W. Wells, Woodhouse, Norfolk: Plums and peaches a total failure. The supply of apples, pears and quinces is very large, and of the two former large shipments are being made. There has been a surplus also of cherries and small fruits.

E. M. Crysler, Charlotteville, Norfolk: American Golden Russet, Talman's Sweet and some other hardy varieties are looking well. Baldwins and some others are not.

J. R. Martin, North Cayuga, Haldimand: Very little injury here from any cause. Shipment of all fruits except peaches. There has been a surplus of apples, plums and cherries.

Joseph Martindale, Oneida, Haldimand: Fruit trees are in good condition. Apples are a very good crop and more than enough for home consumption. Price $1 per bbl.

S. Wiso Hornibrook, Dunn, Haldimand: Trees are troubled a good deal with the louse, and many have been blown down.

James McClive, Bertie, Welland: Condition of fruite trees is favourable. I believe the failure of the apple crop was caused by heavy rains when the trees were in blossom. There has been no want of any fruit except apples and cherries. There is a surplus of pears, grapes, currants and berries.

Alex. Reid, Crowland, Welland: Peaches suffered to some extent by storms. There is a surplus of apples.

John R. Smith, Plympton, Lambton: Fruit trees look healthy. Apples are a good crop. They appear to pay the farmer better than grain. They are in good demand at $1 per bbl.

Chas. Gale, Sombra, Lambton: Apples are plentiful here at ten cents per bushel. Other fruits are scarce. The last gale blew all the apples off the trees.

Martin Wattson, Bosanquet, Lambton: Apple and pear trees look well everywhere. Plum trees are dying in every direction. I could not drive many miles without being able, without going off the concessions and side-lines, to see thousands dead with black knot. No one cares to enforce the law. Apples are more scabby than ever. Blight is the cause. The codling larva has been very destructive, and the heavy gale of the 14th did much damage. There is a surplus of apples and pears, and there was of cherries, plums, currants, raspberries, strawberries and gooseberries.

J. Dobie, Bosanquet, Lambton: Fruit trees are in good condition. Considerable fruit has been damaged by insects. Ten thousand barrels of apples have been shipped from this neighborhood.

R. Fleck, Moore, Lambton: The only injury to my apple crop was from the great storm of the 14th and the codling moth. Many barrels of apples have been sent north and a few to England.

Walter Hick, Goderich, Huron: Fruit trees generally look healthy. There was some loss by the codling moth, and a great many apples which were not gathered before the storm of the 14th were blown off and badly bruised. There is a large quantity of apples left for export and a good surplus of pears.

Alex. Drummond, Howick, Huron: Apple trees have made good growth, but the plum is dying out. No injury has been done by insects, but the long, hot, dry weather retarded growth and the apples are smaller than usual. There is a surplus of apples.

M. McDonald, W. Wawanosh, Huron: A blight came on the fall apple trees about June, and much of the fruit and leaves fell off. The winter apple trees stand well. There is less worm in apples this year than for some time. Thousands of barrels of apples are being exported.

John B. Ritchie, Greenock, Bruce: Fruit trees are in good condition. No loss of fruit from any cause, and there is plenty of all kinds excepting plums. There is a surplus of apples, but no market, and very low prices.

John Douglas, Arran, Bruce: Fruit trees are in fair condition. Fruit not secured suffered great injury by the wind storm of 14th Oct. blowing all the fruit off the trees. A large surplus of apples, but no demand, and farmers are feeding them to their stock.

James Johnston, Carrick, Bruce: Trees are in good condition. A very large percentage of the apple crop dropped off during storms, but there is sufficient fruit for local demands. If any surplus, it is of apples only.

John Mackenzie, Sarawak, Grey: Fruit trees are in good condition. The bark louse is injuring trees very much. There is abundance of fruit, and large quantities are being shipped. There is a surplus of plums, apples and pears.

Malcolm Cameron, Bentinck, Grey: Fruit trees thrive better than for the last two years. No injury from storms, blight or frost, but insects are injuring the apples, much of the fruit falling off before maturity. Apples are abundant and selling very cheap.

Robert Carruthers, Artemesia, Grey: Condition good, loss very light, but a few trees partly dead last year have given out altogether. Nearly all the common fruits, such as apples and various varieties of plums yield a surplus. There are not many pears or peaches grown in this section yet.

Hector McRae, Bentinck, Grey: There is hardly a wormy apple this year. Some trees are killed by blight. Any surplus of fruit is of apples.

James Shearer, Egremont, Grey: There is more or less of loss every year from fruit trees dying through the borer or blight. A large number of the fruit trees are thus affected.

Basil R. Rowe, Orillia, Simcoe: Fruit trees have suffered a good deal the last two seasons from some cause, perhaps frost. Apples generally are much spotted with a kind of mildew, which evidently will prevent them from keeping. The supply is large.

John Lennox, Innisfil, Simcoe: Nearly half the apple trees are dead or dying, I think by the last two winters being so severe. There are fewer worms than usual. There is a surplus of apples.

J. K. Irving, Innisfil, Simcoe: Fruit trees were badly broken by the October wind storm. Insects and blight have done much damage. A surplus of apples.

James Farney, Flos, Simcoe: Condition of fruit trees very good. No injury to apples or cherries, but plums were injured by frost.

W. W. Colwell, Essa, Simcoe: Many orchards have been killed out by one cause or another, some winter-killed. The borer is destructive, and want of proper drainage has caused the destruction of many orchards. There is perhaps a surplus of apples.

Thomas McCabe, Adjala, Simcoe: In some places apples were stung by insects and rotted on the trees.

W. D. Stanley, Biddulph, Middlesex: Fruit trees are in good condition, to all appearance, in every respect. There is sufficient fruit for local demands and a large surplus of apples.

James Alexander, Ekfrid, Middlesex: Trees are generally healthy. Considerable damage was done to both trees and fruit by the late wind storm. There is a surplus of plums and apples, but the apple crop is much less than last year.

A. H. Secord, N. Dorchester, Middlesex: Fruit trees, especially apples, are not doing as well as might be desired, not having fully recovered from a blight or something that attacked them some years ago. Pears and apples are plentiful. There is perhaps 33 per cent. damaged by worms, but yet a large quantity is being shipped to England.

Thomas Baird, Blandford, Oxford: Fruit trees in general are healthy to all appearance. On the 14th October a great number of fruit trees were torn up by the roots and others badly mutilated by the storm. There is a surplus of apples, but the wind has damaged many of them.

James G. Pettit, East Oxford, Oxford: Fruit trees are in a healthy condition. A great many apples were spoiled for export purposes by the high winds. The supply of all kinds of fruit except peaches, plums and cherries, is sufficient for local consumption.

Robert Leake, East Oxford, Oxford: Nearly everything is dead in this neighborhood except apple trees, which are doing fairly well. Trees are freer than usual from insects; a few codling-moths were noticed. The fruit supply is sufficient, and there is a surplus of apples, but not a large one.

James Anderson, East Zorra, Oxford: Some trees are dying off, but on the whole the trees are healthy. There is a large surplus of apples, which sell at $1 per bbl.

Daniel Burt, S. Dumfries, Brant: Trees seem fairly healthy. The late storm damaged fruit trees a good deal, uprooting and destroying some trees, and blowing off nearly all the unpicked fruit. There is a surplus of most kinds of fruit.

C. Jarvis, Brantford, Brant: I have hundreds of fruit trees of all kinds which have passed through the insect pest all right, except one cherry tree, with fruit half grown. When the pest struck the tips of every branch, though it was a very healthy young tree, it died. Another large Black-heart was struck badly, and though the cherries got about ripe and black, they did not fully develope in size and were so poor in taste that no one would eat them. Others were struck, but not so much. The black currants, also, for the first time in my experience, were struck with a similar insect, or the same. The leaves turned black as though sprinkled with coal dust, and the currant did not grow quite so fine, but there was not much defect in flavor. All fruit is abundant—pears, apples, plums, and grapes. The latter are very abundant, and all have fully ripened, such as Rogers' 3, 4, 9, 15, Agawam, Concord, Hartford, Prolific, Diana, Delaware, Iona, and others not named. No peaches or apricots this year. The wind storm has broken down several trees.

Thos. Lunn, Oakland, Brant: Fruit trees have suffered from the two severe wind storms that have visited this section the present year, one on June 17th, and the other on October 14th. Both destroyed many valuable trees in forest and orchard. Cherries and plums are a better crop than for some time.

Alex. McLaren, Hibbert, Perth: Fruit trees are in good condition. Large surplus of apples for export, and a good margin of profit for growers.

Thos. Steele, Downie, Perth: Trees are not very good in this locality, apple trees having been dying, either wholly or in part, for some years past. I do not know the cause. There was some slight damage by a storm. There is a surplus of all kinds of fruit, but especially of apples, which are a large crop.

R. G. Roberts, Wallace, Perth: Cherry trees were badly affected by large numbers of small dark bug which gathered on the under side of the leaves.

George Leversage, Fullarton, Perth: Apples have been a plentiful crop, but the recent storms blew them all from the trees, consequently they will not keep through the winter so well.

Thos. Page, Wallace, Perth: The condition of fruit trees is good. Apples have made more young wood than usual. Plums seem to be taking a new lease of life here. Cherries have made no wood; they were damaged in the spring by a black *aphis*. The wind storm of last week has made a large amount the apple crop fit for nothing but cider, and it (cider) is pretty plentiful.

Duncan Macfarlane, Puslinch, Wellington: The condition of the fruit trees is not very good; quite a number are dying. There is a certain amount of loss by the codling-moth. The storm blew the greater part of the apples off the trees. The supply of fruit is sufficient for local consumption, and there will be a surplus of apples.

W. D. Wood, Eramosa, Wellington: There is plenty of apples and to spare; the market is glutted.

James Cross, Peel, Wellington: The condition of fruit trees is not good. Plums and cherries are almost a failure by black knot, and apples are not good. I think some other mischief ails them. There is enough fruit for home use, but not much for the public market.

W. Brown, Guelph, Wellington: There is no marked trouble in any form with the fruit trees. There is a large surplus of apples.

Edward Halter, Waterloo, Waterloo: Fruit trees are getting worse every year, dying off, and if people don't plant other orchards the time will be seen by this generation when we will not have apples enough for our own supply, or none at all. The apples are so plentiful that cider apples can be bought from 10 to 15 cents a bag, and large winter apples from 25 to 38 cents a bag. Plums and cherries were scarce. The trees died some years ago by the black knot, and the young trees do not bear much.

Henry Liersch, Wilmot, Waterloo: The condition of fruit trees is good. Cherries and plums are a failure by black knot, but apples are in abundance. Apples were thrown down by the storm, therefore a large quantity of cider has been made. There is a surplus of pears, apples and grapes.

Richard Blain, North Dumfries, Waterloo: Fruit trees look very bad, and orchards will require a good deal of replanting, as black knot and worm have injured them a good deal these last two or three years. We will have plenty of fruit for home use, but very little surplus.

Wm. Dynes, Mono, Dufferin: Fruit trees are in very good condition. No injury of any account has been done. There is a surplus of apples.

Robert Dickson, East Luther, Dufferin: The condition of fruit trees is good. There are none but apples here, and they are young yet. They have done well this year.

Alex. Servos, Niagara, Lincoln: Apples look well. Peaches were badly winter killed. Some have not survived—say 20 per cent., but the balance are looking fair. A large quantity of all kinds of fruit was left for shipment.

George Walker, Clinton, Lincoln: Fruit trees are in good condition; a few have suffered by blight, and many peach trees by the severe cold last winter. There was quite sufficient fruit for home use. There is a small surplus of apples, and of plums and grapes a large surplus.

D. B. Rittenhouse, Louth, Lincoln: Fruit trees are not in good condition. Surplus of apples.

A. G. Muir, N. Grimsby, Lincoln: Fruit trees look healthy, and have not been materially injured from any cause. The supply of all kinds, except peaches, is more than sufficient for home consumption, although the apple crop was not one quarter of what was contemplated at blossoming time.

Erland Lee, Saltfleet, Wentworth: Fruit trees look bad, especially apples. The hard winter and dry summer created havoc with numbers of orchards, but others again look well and bore well. There was no damage by insect. Apples, grapes and pears are abundant.

Joseph Snasdell, West Flamboro', Wentworth: Fruit trees were injured by a kind of dry rot just under the ground; many dying and dead. A good many apples, in fact nine-tenths, injured by a scab on the fruit. I cannot tell the cause and would like to know. Those trees that are shaded, or in shady places, suffer less than those that are exposed to the sun. There is plenty of fruit that is of inferior quality. Plums, pears and second class apples are in surplus quantities.

Robert Inksetter, Beverley, Wentworth: Apple trees seem to have recovered from the blight that affected them in June, but much of the fruit is almost worthless. The late wind storm did considerable damage by shaking them off and bruising, still there is enough for home use and a surplus of pears.

Colin Cameron, Nassagaweya, Halton: The trees appear to be healthy. The apples which were not stored away a couple of weeks ago were nearly all knocked off with the wind; not much damage to fruit from any other cause. The apple crop is so large that it is difficult to dispose of fall fruit.

W. C. Ingelhart, Trafalgar, Halton: Fruit trees did badly this summer; they seemed to be affected with a blight last spring and a good many died through the summer. The supply of fruit more than sufficient, and large quantities of apples, pears, plums, grapes, and small fruits, are being shipped from this vicinity.

John Shaw, Esquesing, Halton: Great loss of apples by a heavy gale of wind which stripped nearly the whole crop off the trees, but think there may be enough for local consumption saved. The surplus fruit, if any, will be apples.

Wm. Porter, Toronto Gore, Peel: Apparently in healthy condition and free from insects, blight and frosts. About one-half of the apple crop was blown off by late storms. There is about sufficient for home use.

Wm. S. Buist, Albion, Peel: Apples were damaged by spring frosts so that the crop is not large; not half a crop; nearly all the apples are wind-fallen by the last storm. Cherry and plum trees are badly injured by black-knot. Black currant bushes had a blight this summer which injured the crop. There is a sufficient supply, but not much surplus of any fruit.

M. Jones, Whitchurch, York: Fruit trees are not healthy, and much of the fruit is small and spotted. Northern Spies and Snow apples are hardly fit for cider.

George Evans, Jr., Georgina, York: Fruit trees very good, except the plum and cherry, which are badly injured by black-knot, but not injured to any extent by other causes. The supply of fruit of all kinds is sufficient for the local consumption and there is a small surplus of apples.

Angus Ego, Georgina, York: Many of the young trees are dying; the bark splits on the north-west side. Apples this year are very much affected with something like scab, particularly snow apples; a great many were blown off the trees with the wind storm. I am not aware of any great surplus in this part.

J. D. Evans, Etobicoke, York: Fruit trees are poor. From six hundred apple trees I have not got four barrels, although they were full of bloom in the spring. There is also a surplus of apples here, however bad the failure.

John Foy, Scugog, Ontario: Some varieties of apples were a partial failure, more particularly the Snow; they were very scabby and did not attain to any size, and others were affected inside, turning brown and hard.

R. S. Webster, Scott, Ontario: Condition of fruit trees fair. I am of opinion that the trouble about black knot, where the trees are carefully looked after, is about over, but very slight symptoms appearing this year. No surplus.

Hy. Glendinning, Brock, Ontario: Some varieties of apple trees, especially the Russett family, have been very badly affected by the *Aphides*, which caused the fruit to mature imperfectly. There is plenty of fruit for local consumption.

E. Lanigan, Mara, Ontario: Fruit was only a middling crop in this locality and there is not a sufficiency for local consumption.

James McLean, Cavan, Durham: Apples and pears look well; plums were a failure; apples are very scarce and of poor quality.

H. A. Walker, Hope, Durham: Apple trees have not recovered from the hail storm a year ago last June; quite a number were loaded on the east side, with none on the west side.

John Foott, Hope, Durham: The fruit trees suffered from drouth, but have improved very much since the fall rains came on. There was great loss by insect pest. Apples are small and scabby. The supply of fruit is sufficient. There is a slight surplus of apples.

W. J. Westington, Hamilton, Northumberland: Many fruit trees were injured by lice on bark and leaves, causing many to die. There is more than sufficient fruit and an abundant supply of apples.

David Allan, Seymour, Northumberland: The condition of apple trees is good. Apples are not as abundant as usual and many are badly affected by insects.

George Kennedy, Sr., Haldimand, Northumberland: A good many trees are dying. The storm of the 14th October blew the apples all down and broke some of the branches. They are shipping apples all along the front.

Andrew M. Haight, Hallowell, Prince Edward: Fruit trees are in very good condition. Apples are a very poor crop. There are no plums or pears to speak of; the plums were all stung; of apples, only, is there a surplus.

P. W. Miller, Kaladar, Lennox and Addington: Fruit trees are in good condition. About one-third of the fruit is scabby. The supply is sufficient. There was a good surplus of small fruits.

C. R. Allison, S. Fredericksburg, Lennox: Fruit is very scarce, except apples, and in many sections the apples are far below the average crop.

R. J. Dunlop, Pittsburg, Frontenac: Apples are generally about an average crop in this section; there is considerable loss by storms this month. Plums and cherries are almost a complete failure and many of the plum trees are dead from blight. Of apples there will be sufficient for local demand and there may be a surplus in some sections.

Arch. Knight, Kingston, Frontenac: Fruit trees are in very good condition. There has been great loss by the crows; they cover the orchards by thousands and destroy the apples very fast. There is sufficient fruit, with a small quantity of apples to spare.

Alex. Ritchie, Storrington, Frontenac: Apple trees were covered all over with green lice, which were on them all summer. The apples were all blown off on the 14th October by a big blow. There is a surplus of apples and enough of all fruits.

W. A. Webster, Lansdowne, Leeds: I never saw as fine a quality of fruit exhibited at our local fairs, as this year. We have enough for local consumption, but none for export.

Gideon Fairbairn, Edwardsburgh, Grenville: Fruit trees are not good. Apples suffered considerably from blight, particularly Snows. Surplus of apples.

W. Y. Newman, Oxford, Grenville: The young apple trees are in fair condition, excepting an occasional tree, where the limbs dry up and decay. There is a sufficiency of fall apples, but a scarcity for winter keeping. No surplus of any kind.

James Collison, Matilda, Dundas: Condition of fruit trees is very good. The Fameuse and McIntosh apples are damaged considerably by black spots. Small surplus.

G. C. Tracy, Williamsburg, Dundas: Small fruit trees were plentiful for home use, and there are some apples, perhaps, to spare; but the apple crop is not up to the average, and the quality is poor.

R. Anderson, Cornwall, Stormont: Trees in very good condition, no loss of fruit, which was sufficient, with a surplus of apples.

James Clark, Kenyon, Glengarry: Apple trees are good. There was considerable scab on apples, caused by the weather in some way not explicable, but no blight or injury by frost. The supply of apples, only, is sufficient, and of this fruit there will be a surplus.

Wm. Ferguson, W. Hawkesbury, Prescott: Fruit trees are looking well. There are some complaints about black spots on the better kinds of apples, and there appears to have been some kind of a blight on some apples; there was a fair crop of other fruit, but no surplus.

Alf. Hill, Cumberland, Russell: Not much fruit raised here. Small fruits were good.

James Sieveright, Gloucester, Carleton: Fruit trees in good condition, no damage by insect or any other cause. Fruit is sufficient for local purposes, and of apples there is a surplus.

P. E. Bucke, Ottawa, Carleton: Many of the late grapes were destroyed by frost. There has never yet been sufficient fruit raised here for local consumption, and of no one fruit is there a surplus.

Peter Anderson, McNab, Renfrew: Fruit trees are in very good condition, and none that I am aware of injured this season by anything. There is enough fruit and a surplus of apples.

David Taylor, Bagot, Renfrew: Apple trees look well; hardly any loss this season of fruit or trees. Sufficient fruit, generally, and a surplus of apples.

John M. Cleland, Darling, Lanark: The condition of fruit trees is fair. A great number of old trees are dying off. Young trees have fine growth. Plums and cherries are a very inferior crop.

Lawrence Dowdall, Drummond, Lanark: The condition of fruit trees is very good. No insect damages. The supply of fruit is sufficient, and more, for it is very hard to sell them, and they are fed to hogs.

Thomas Beall, Lindsay, Victoria: Fruit trees are looking well. The Aphis Malus and perhaps some of the other varieties of Aphis have been unusually troublesome, but there has been no loss of any consequence from any of the other causes. There has not been sufficient fruit, excepting strawberries, and no surplus. Grapes of all varieties have been well ripened.

Wm. Ramsay, Mariposa, Victoria: The fruit trees are, in general, looking well, but there was a blight of some kind affected the apples; a great many of them were scabby and spotted and some of them cracked open so that they were no good for use.

James S. Cairnduff, Harvey, Peterboro': A great many trees are dying, some planted from ten to fourteen years. They were blighted; they blossom out full in spring and then wither. About one-half of the apples are wormy and most of them are covered with fungus spots. Not sufficient fruit for home consumption.

Wm. Armstrong, Otonabee, Peterboro': Fruit trees are healthy, and on the whole the fruit was good, but some kinds of apples were spotted from some cause. The fruit was unsaleable. There will be a surplus of apples.

D. Galloway, Lutterworth, Haliburton: Fruit trees are in good condition; some trees were damaged by wind, owing to the heavy load of fruit and lack of care to prop up in time. The supply of fruit is not sufficient, owing to the lack of fruit trees (apples). Wild plums and crab apples were very plentiful.

Charles R. Stewart, Dysart, Haliburton: There are very few fruit trees. There is much trouble and uncertainty about apples. The wild berries are in great profusion. Raspberries were sold at about 50c. a patent pail. There is a fine opening here for a preserve factory.

J. R. Ketcheson, Madoc, Hastings: Fruit trees are healthy and good, but very much injured by insect or blight. There is quite sufficient fruit for home consumption and a surplus of harvest apples, and the Russets and Ben Davis.

Edward Bray, Jr., Stisted, Muskoka: What fruit trees are left are in good condition. The borer did some damage. There is not enough grown for local consumption, but there was a very good supply of crab apples. There were some good samples of Duchess of Oldenburgh and Tetofsky grown.

Charles Robertson, Cardwell, Muskoka: Fruit trees are nearly all dead; I think that is owing to the varieties that have been planted not being the best for this northern climate. The supply of fruit is not sufficient for local consumption.

J. M. Ansley, McDougall, Parry Sound: The fruit trees suffered heavily last winter by the frost. Many choice trees perished, and became black (I presume frozen to the centre). Those that survived have done well. Of fruit there is always a large deficiency of all kinds, which must be imported from Owen Sound, Collingwood, Meaford, etc.

R. Blair, Carling, Parry Sound: Some fruit trees are doing very well. The borer has injured a good many apple trees. There is a great quantity of fruit brought from other places. There is a surplus of blueberries and cranberries.

J. H. Johnson, Sandfield, Algoma: There are two or three fine young orchards just beginning to bear and in prime condition. A number of young trees have died on account, I think, of not having the ground drained. No damage has been done by insects, storms, blight or frost.

THE NEW CROP OF FALL WHEAT.

There was an increase, though not a very substantial one, in the acreage sown with fall wheat last season. The extensive winter-killing of the previous crop, the drouth of last summer and the low prices current, deterred a good many farmers from sowing as much as usual; but, on the other hand, the bad failure of spring wheat in many places led others to try a greater breadth of the winter grain, the more so that the season was extremely favorable for the necessary operations. Even in those counties where the previous crop was most unsuccessful there was a larger acreage sown last fall, and very few counties come short of the usual breadth. In the eastern Lake Ontario and western St. Lawrence counties the percentage of increase appears to be considerable, caused by the satisfactory results of the previous harvest, but the whole area devoted to fall wheat in that section is not large. There was great unanimity in the reports concerning the favorable condition of the ground at seeding time. In a few cases summer-fallows were found to be hard and dry for seeding in August, and a number of correspondents in the Lake Erie counties spoke of delay caused by the September rains; but it may be said that on the whole the condition of both fallow and stubble ground for the reception of the seed has seldom been as good. The conditions were equally favorable for germination and growth. In some instances where the wheat was sown in August, the plants were slow in starting on account of the drouth, but the abundant rains and high temperature of September and October enabled them to make up lost time. With very few exceptions the correspondents reported that the grain made remarkable progress and was in fine condition to withstand the hardships of winter. Some, indeed, were apprehensive lest it should prove too rank and luxuriant to encounter a season of heavy snow; but none regarded it as at all lacking in vitality. There was less difference in this respect between fallow and stubble fields than is usual. The ravages of insect pests were not generally serious. Scattering reports from most of the western counties spoke of injury by the Hessian fly and the wire-worm, the former chiefly on poor ground and the latter on freshly broken sod. A good many also complained of damage caused by the white grub (caterpillar), which seems to have been much more destructive than formerly.

Elgin, Middlesex and Oxford are the only counties in which the injury from these pests was serious. In the last named counties some few fields were ploughed up on account of their ravages. The damage, however, was not very extensive in the aggregate. From the head of Lake Ontario eastward these insect pests are so few as to be practically unknown.

FROM THE NOVEMBER REPORT.

Edward Nash, Mersea, Essex: About the same acreage. In fine condition, strong and thrifty. Hessian fly and wire-worm are working in some places.

Francis Gifford, Camden, Kent: Less fall wheat, but put in in a great deal better shape. I never saw it better. Generally good; affected slightly by wire-worm.

L. M. Brown, South Dorchester, Elgin: About the same quantity of fall wheat. The ground was in excellent condition, and the wheat is generally splendid. Early sown is injured a little by grub or wire-worm—cut off an inch below the surface.

George Russell, Yarmouth, Elgin: Not near as much sown this fall. Cannot raise it for the present price. The ground was splendid, and the wheat looks healthy—what is left. Some fields are entirely eaten up by the fly and the white grub.

James Morrison, Walsingham, Norfolk: Not near so much fall wheat sown this season as last. The ground was in good condition at seeding time. The crop looks well except where the Hessian fly is working, and it is very bad on some pieces.

Robert Watson, Windham, Norfolk: About the same acreage as last year. At the commencement the ground was very good; about the 15th a heavy rain came which made seeding late on heavy land. The grain is healthy. In some fields it is cut off about one inch below the top of the ground, and in others cut off by the white grub.

Joseph Martindale, Oneida, Haldimand: There were more acres of fall wheat sown this fall than last.

V. Honsberger, South Cayuga, Haldimand: The acreage of fall wheat is about the same as last year. The ground was somewhat rough, but otherwise good. The wheat is generally good. In some fields slight injury has been done by wire-worm.

John A. Law, Stamford, Welland: The acreage of fall wheat sown this fall is much larger than last fall. The ground at seeding time was dry and later than usual, but the present appearance of the crop is excellent. No fly or insect.

John R. Smith, Plympton, Lambton: A large acreage of fall wheat has been sown. The ground was in excellent order for seeding. The present appearance of the growing crop indicates an abundant harvest. Never did the plant look so favorable and healthy at this season of the year. At present (October 22) the thermometer registers 75 degrees.

Joseph Osborne, Plympton, Lambton: There is scarcely as large an acreage as formerly. The wire worm is at work on many fields.

John Dallas, Bosanquet, Lambton: There is an increased acreage sown with fall wheat. The present appearance is excellent. In some fields the grub has done considerable damage.

M. McDonald, West Wawanosh, Huron: A great deal of the wheat is very yellow in the leaf. I cannot give the cause, as I cannot find Hessian fly or any other insect.

Thomas Strachan, Grey, Huron: I think there is fully more this season than last. I never saw the crop look better than this fall. I have seen no injury to the fields this fall except one field, sown too early I think. The leaf looked yellow and did not look near as well as what was sown later.

Lewis Lamb, Greenock, Bruce: There is about the same acreage of fall wheat as last year. The ground was in good order at time of sowing. The crop has a very favorable appearance at present, except in some early-sown fields, where the wire-worm is doing considerable damage.

Robert B. Fleming, Saugeen, Bruce: About the same acreage as last year. The wheat looks well, and many fields, to my notion, are too far advanced, but that will depend on the winter.

John Morice, Normanby, Grey: The acreage of fall wheat sown in this locality is about as large as this year's crop. The ground was in good working condition at seeding time, and the crop has a fine, healthy appearance at present. I hear some odd complaints of the Hessian fly, but have not seen any of its doings.

C. Julyan, jr., Sarawak, Grey: Rather a larger acreage than last year. There are some complaints of Hessian fly—its first appearance in this section—but not much apparent damage.

George Binnie, Glenelg, Grey: I should think about fifty per cent. more than last year. Most of it was sown early—before September 15th, and some of it in August. Much of it was sown on ground well prepared, and presents at the present time a very good appearance. Our farmers are beginning to understand fall wheat culture, and no doubt will succeed better in future. I have seen or heard nothing of the Hessian fly.

Thomas McCabe, Adjala, Simcoe: The acreage of fall wheat sown is not so large as for this year's crop. The condition of the ground was rather dry at seeding time and up to the 22nd September, but after there was a very good growth. The present appearance of the wheat plant is very healthy. No signs of any enemy.

Chas. Cross, Innisfil, Simcoe: About the same quantity sown as last year, but fully 50 per cent. of last year's was ploughed up. Wheat sown before the 10th September looks well, but some sown in August and by 1st September is turning yellow in spots. I suspect the Hessian fly.

J. M. Kaiser, Delaware, Middlesex: The condition of the ground being good, a larger quantity of land was sown to fall wheat than last year. Most of the fields look well. The Hessian fly appears to be at work, however, to some extent. The wire-worm has also injured some fields considerably.

W. D. Stanley, Biddulph, Middlesex: There is a much larger acreage of fall wheat than last year. The ground was splendid in summer-fallows and land early gang-ploughed. The wheat was never better. It has quite enough top—rather too much in some fields. Considerable injury has been done on sod by the grub. A number of fields have been or will have to be plouged up.

Wm. Black, Westminster, Middlesex: Owing to lowness of price the acreage this year is far below last, but the ground was in far better condition this year, consequently the growth is luxuriant, though in some parts the wire-worm has badly thinned some fields, while some few had to be re-sown. Summer-fallows have escaped the pest.

James A. Glen, Westminster, Middlesex: About the same amount sown as last year, and the ground was in altogether better order. It was sown earlier—I think rather too early in many cases, as it has too much top, and some is being eaten down with calves and sheep. The white grub and wire-worm have done a great amount of damage, thinning out the plants and greatly injuring inverted sod.

Thomas Baird, Blandford, Oxford: I think there will be a increase in the acreage from the fact of the spring wheat doing so badly. Some fields look beautiful, others very poor indeed. There is something that is doing considerable damage to the fall wheat, killing it clean out. Some call it the wire-worm and some grub-worm; others call it the Hessian fly. It may be one, or it may be them all combined. This I do know, that there are very few fields that are entirely free from their ravages.

D. W. McKay, East Zorra, Oxford: There is a good deal more sown. The ground was dry but clean. There never was a better appearance; in many places farmers are grazing with calves and sheep to keep it down. In sod that was broken up last spring the grub is doing some injury, but not to any extent.

James G. Pettit, East Oxford, Oxford: Some fields are excellent, some are bad, and a few have been ploughed up. Hessian fly, wire-worm and grubs seem to have combined for the destruction of a good share of the wheat crop.

Thos. A. Good, Brantford, Brant: About 70 per cent. of last year's. I may be too high, for a good many farmers only sowed about half their usual quantity on account of low price (70c. per bushel) and risk of winter. The ground was in good condition, and wheat was put in in good order, made rapid growth, and at present is looking nearly too well. I am afraid some is too high. No damage done by insects so far as I know.

D. McLean, Ellice, Perth: About the same acreage of fall wheat was sown again. The ground was in fine order to receive the seed, and the appearance was very fine until lately; it is getting brown and spotted with the Hessian fly and the worm.

John Hodgson, Hibbert, Perth: Every person has sown all he could, as spring wheat has done so badly. The ground was good at seeding. The wheat is almost too good. There are a few fields that are suffering with wire-worm.

Thomas Page, Wallace, Perth: There is about the usual acreage of fall wheat. The present appearance is good, as it is strong on the land and covers it well. I think it was put in earlier than usual, and the fallows are better prepared. There are no symptoms of it getting too rank as yet. The Hessian fly is not known here, and the midge has not been seen for some years.

Charles Masson, Eramosa, Wellington: The acreage is fully more than it was last year. As a general rule the ground was in a good state of cultivation and well manured, and consequently the braird looks well, is thick and close, and to all appearance should stand the winter well.

Edward Halter, Waterloo, Waterloo: There is about the same acreage sown with fall wheat, but I notice that some people did not sow all their summer-fallows, and hear them saying that fall wheat does not pay as well as oats or barley—the price is too low. The fall wheat is stronger than I ever saw it before. The fields sown in August or the beginning of September are rather too strong. The wheat is growing yet, and with a heavy mass of snow it will be damaged or totally killed. There are some yellow spots, indicating presence of Hessian fly.

John Snyder, Wilmot, Waterloo: There is fully as much fall wheat sown as last year. The weather was favorable for sowing fall wheat and the ground was in good order. Fall wheat looks good. There are some fields turning yellow, from what cause I could not tell.

Robt. Gray, Mulmur, Dufferin: About the same acreage. The wheat looks healthy; a little thin on the ground. Don't hear of any injury by insects.

Robt. Dickson, East Luthe Dufferin: There is a much larger acreage of fall wheat this year. The crop looks well.

John H. Lindebury, Clinton, Lincoln: There is more fall wheat sown than usual. The condition of the ground at seeding was very good, and the present appearance of fall wheat was never better. It has been hurt by nothing so far.

George Hart, Saltfleet, Wentworth: There is more wheat sown than last fall. The ground was ready to sow by the fifth of September, and was in good condition. The later wheat was got in very wet, but the warm growthy weather has brought it well along.

W. C. Ingelhart, Trafalgar, Halton: There is about one-fourth more fall wheat sown this fall than last. The ground was in good condition at the time of seeding. The crop at present has a fine appearance, the plant having made a vigorous growth. No injury by insects.

John Sinclair, Chinguacousy, Peel: A large acreage of fall wheat has been sown this fall. The land was in a fine state of tilth at seeding time. The plants have made excellent progress, having escaped any injury from insects, and I never saw the prospects more favorable for an excellent harvest.

Peter McLeod, Chinguacousy, Peel: The acreage of fall wheat sown this year is rather more extensive than last year, on account of a very favorable season for putting stubble and pea land in fall wheat. The condition of the ground was all that could be desired. The present appearance is very promising. Some fields that have been fallowed from old sod are receiving considerable injury from wire-worm. Not a few farmers are adopting the method of taking a crop of hay off before they fallow the ground.

J. Bartholomew, Whitchurch, York: Scarcely as much sown as last year. The ground was in good condition at seeding. The wheat is very much stronger and healthier than last year at this date, being well stooled out.

E. Lanigan, Mara, Ontario. More fall wheat sown this year than last. The ground was in splendid condition. The crop is looking very well at present.

R. Forsyth, Pickering, Ontario: There is less fall wheat sown—almost one-third less acreage. The condition of soil was good—not too wet, but was more suitable than the weather has been for promoting growth. The present appearance is backward. No Hessian fly or other pests.

James McLean, Cavan, Durham: There is about double the acreage of fall wheat sown. The ground was in excellent order. The appearance is very promising. No injury done by the Hessian fly or other insect.

H. A. Walker, Hope, Durham: There is double the amount of fall wheat sowed that there was last year. The ground was dry at the time of seeding, but at present the crop looks well. No insect has yet troubled it.

M. Morden, Brighton, Northumberland: A large increase, probably 40 per cent. over last year. For early seeding the ground was dry, but early in October copious rains, followed by fine warm weather, helped the grain, which has made a fine growth since seeding.

George N. Rose, North Marysburgh, Prince Edward: I should judge about 50 per cent. more was sown this fall than last. The ground was dry and lumpy. The rains came on about and after seeding time, and very little frost, so wheat has a good top and looks well.

C. R. Allison, S. Fredericksburg, Lennox and Addington: A larger breadth of fall wheat has been sown this fall than last. The ground was in good condition and the crop looks well; no appearance of being injured by fly.

Joshua Knight, Storrington, Frontenac: I think there is more fall wheat sown this fall. The ground was in splendid condition, and the present appearance is good—never better. No insect; the Hessian fly is not known here.

John C. Stafford, Rear of Leeds and Lansdowne, Leeds: Acreage about the same as last year. The ground never was in better condition for seeding. The wheat presents a splendid appearance. So far the weather has been favorable. No Hessian fly in this locality.

G. C. Tracy, Williamsburg, Dundas: There is double the extent of fall wheat this year. The ground was good but dry. The wheat is excellent. The Hessian fly is unknown by name.

James Sieveright, Gloucester, Carleton: There is about the usual acreage sown. The wheat in general is in good order. No damage was done by the Hessian fly or other insect.

Lawrence Dowdall, Drummond, Lanark: There has been a great quantity of fall wheat sown this fall, and it looks very well at present, as we have had a fine growing fall, with frequent rains.

John Fell, sr., Somerville, Victoria: There was about the same acreage of fall wheat sown as last year. The crop is in good condition in every way.

Wm. Ramsay, Mariposa, Victoria: Fall wheat acreage about the same as last year. The ground was little too dry at seeding, but the crop looks well at present.

M. McIntyre, North Monaghan, Peterborough: There is a large acreage of fall wheat sown as compared with this year's crop, pease and barley stubble being ploughed after harvest and sown in fall wheat. The ground was in good condition when sowed, the crop looks well at present.

Thos. Tellford, Ennismore, Peterborough: A slight increase of acreage over last year. The ground was in fine condition, and the wheat is fine. We believe a large amount is getting too rank but don't believe in grazing it with pigs or calves. It leaves the roots too much exposed.

Anson Latta, Thurlow, Hastings: I think the statistical returns will be large this year. Early seeding was rather hard and dry; later very nice with plenty of rain. I never saw a better prospect; plenty of growth and good color. No injury by fly or insect of any kind.

THRESHING, MARKETING AND FALL PLOUGHING.

Farmers had last year an unusually early harvest and an exceptionally fine fall to facilitate their work. As a consequence the threshing of grain of all sorts was almost completed in every part of the province at the end of October, except in some portions of the extreme east and north, where it is customary to defer the work until sleighing sets in. The marketing of grain, however, by no means kept pace with the threshing, chiefly on account of the very severe depression in prices. In most cases where farmers were able to hold their grain they declined to sell, living in hope of an improvement in prices during winter. Probably twenty-five per cent. of them, however, marketed at least their wheat and barley in the fall—some because they feared still further depression, and a great many more because they were in dire need of the cash. This diversity of opinion and practice obtained equally in nearly all parts of the province, though, in the counties where the greatest dependence is placed on barley, the marketing of that grain was more general than elsewhere. It may be said that in the great majority of cases where barley graded No. 1 it was promptly disposed of, as the prevailing opinion seemed to be that the money return for it was better in proportion than that brought in by wheat. Discolored barley, which formed a considerable portion of the whole crop, was largely fed to stock. A good many correspondents averred, however, that it would not pay to turn even the lower priced barley into beef at its then figure. Others stated that in their neighborhoods the farmers found it more profitable to sell barley and feed other coarse grains. The abundant crop of pease and the low prices offered for them influenced a great many in that direction.

With the exception of the more westerly of the Lake Erie counties, portions of the county of Lincoln and large areas in the northern districts of the province, fall ploughing was further advanced last November than at the corresponding period for many years back. Generally speaking, the land was in fine condition for the plough, the weather very favorable for work, and as a consequence an unusually large area was turned over. Many farmers had finished their ploughing at the date of the November returns: a considerable number had done more or less cross ploughing, while a few had even entered upon a third course. In the northern districts the ploughing was pretty generally reported to be backward, owing to the wetness of the land after harvest.

FROM THE NOVEMBER REPORT.

A. M. Wigle & Son, Gosfield, Essex: Threshing and marketing are mostly done. Not much barley will be fed; it sells for a better price.

George Green, Chatham, Kent: Threshing is about done. Not much wheat marketed yet, but other grains nearly all marketed. Barley will not be much fed, as there is plenty of pease and corn.

Francis Gifford, Camden, Kent: All the threshing is done, but very little marketed owing to the low price of wheat. Barley will not be much fed, as it is the only grain worth anything.

Andrew Turnbull, Seneca, Haldimand: Wheat is all threshed, but very little marketed: Not much of other grains marketed. Barley will be extensively fed, because of the very low price.

B. B. Smart, Sarnia, Lambton: Threshing is about over for this season. Farmers are busy getting their stuff to market. They are scared lest prices go even lower than they are now.

William Wight, Bosanquet, Lambton: Grain all threshed, but farmers are holding back as much as they can. Prices cannot get worse, and may get better. Barley will not be fed to stock, because other grains, pease, etc., are relatively cheaper for feeding purposes.

Henry Doupe, Usborne, Huron: Wheat is moving very slowly to market; farmers are still holding back. There is not much barley in the country. It will mostly be fed on the farm to fattening cattle and pigs.

John B. Ritchie, Greenock, Bruce: A good deal of threshing done, but very little marketing. Fall wheat is only 68c.; barley, 53c.; pease, 48c. It will pay better to feed barley than to sell it.

John McCallum, Bentinck, Grey: Threshing is pretty well done. There has not been much sold as yet of any kind of grain. Barley is likely to be fed on the farm, as it is more profitable than to sell it at the present market value.

Robert Dunlop, Euphrasia, Grey: Farmers have been busy threshing and marketing wheat and barley, etc., etc. There will not be much barley fed on the farm this year, because barley is good and money scarce.

Charles Cross, Innisfil, Simcoe: Threshing pretty well done. Very little wheat marketed. Barley going out fast. Not much barley is likely to be fed, on account of the low price of cattle.

James Ross, Oro, Simcoe: Threshing of all kinds of grain is more than half done. Farmers are holding back from marketing freely in hopes of, or wishing for, better prices. A good deal of barley will be fed on the farm, rather than sell at present prices.

Wm. Watcher, North Dorchester, Middlesex: Threshing pretty well done. Farmers are slow in marketing—prices are too low for wheat. Barley, bright and plump, is fetching a fair price; will feed oats in preference to barley at present prices.

Robert Leake, East Oxford, Oxford: Threshing all done, but comparatively little marketed yet, except, perhaps, barley. When barley goes over a cent per pound we can get cheaper feed in pease and corn.

George Follis, Wallace, Perth: Threshing is nearly all done; not much sold. Good barley is mostly sold, but colored will be nearly all fed, and that will be about one-fourth of the crop.

John Rea, Eramosa, Wellington: Since the steam threshing began, threshing is mostly done in the fall, and this year it was earlier than usual. Fall wheat is mostly sold. Barley has been sold, as it sells higher in proportion than other grain. Not much barley will be fed, as the price is fair.

Alex. Rannie, Wellesley, Waterloo: About half the crops are threshed, and about a third sold. Pease being a very good crop, there will not be so much barley fed.

Robert Dickson, East Luther, Dufferin: Threshing is about all done, and the grain is going to market fast. Considerable barley will be fed, as the color is bad and the prices low.

James Stull, Grantham, Lincoln: Threshing is about done. Wheat is not half marketed yet. There is a very poor market for barley, which will be mostly fed on the farm. Oats will be about enough for home consumption.

George Hart, Saltfleet, Wentworth: Threshing is all done. Most farmers have come to the conclusion that it does not pay to hold their grain, and are marketing early. Very little barley will be fed.

Edwin Dalton, Nelson, Halton: Threshing is mostly done. Grain is not being marketed very freely. There will not be much barley fed, as it is of good quality.

Wm. McKay, Toronto, Peel: Threshing is mostly done, but not much grain has been sold. People are waiting to see if prices will improve.

Wm. W. Findlay, Scarboro', York: As near as I can judge, about four-fifths of the threshing is done, and marketing, say about one-fourth of wheat and barley. Considerable colored barley may be fed if it will not sell for, say, 50 cents per bushel.

Hy. Glendinning, Brock, Ontario: The bulk of threshing is done, and most of the barley is marketed, but a large quantity of wheat is yet in the hands of the farmers. There will not be much barley fed, owing to its being nearly all of good quality, and pease can be bought for about the same per bushel as barley.

James Roberts, Alnwick, Northumberland: The grain is nearly all threshed, but only those who are compelled have sold, because of the low prices. Barley will be largely fed on account of low prices.

W. J. Westington, Hamilton, Northumberland: Threshing is nearly all done, but very little done in marketing. Barley is about half marketed. Barley will not be fed, as it is in price higher than other grain in proportion to its value.

R. J. Dunlop, Pittsburg, Frontenac: Threshing has been going on for the past month, and marketing is beginning, but farmers are loth to sell at present rates. There is not likely to be much barley fed, as the price of beef cattle is not favorable.

John Ferguson, Wolford, Grenville: Threshing is more than half done. There is no grain marketed yet, as there is no sale for grain of any kind. Barley and other coarse grains will be largely fed on the farm, as it will pay better to feed it to dairy stock than to sell at present prices.

S. Edgar, Kitley, Leeds: Wheat is threshed but not marketed. About 75 per cent. of the barley is threshed, and a good proportion marketed. Barley will be largely fed for fattening purposes.

James Cattanach, Lancaster, Glengarry: Threshing is hurried on, but there is no market yet for grain, except at a very low price. A good deal of barley is likely to be used on the farm this winter to fatten stock.

P. Gareau, N. Plantagenet, Prescott: Threshing and marketing of all grains have gone on very briskly, and a great part of it sold. Barley is not likely to be fed to any extent.

John O'Callaghan, North Gower, Carleton: Threshing is about half done. Most of the barley is threshed for provender. As there were less pease sown this year; barley is needed for feed.

William Selkirk, Petewawa, Renfrew: Threshing will be all done in this township in about ten days from now. Markets are slack for all grains.

John Fell, sr., Somerville, Victoria: Wheat has not been pushed on the market except by needy farmers who have payments to meet. Barley is considerably marketed, but some are holding. Much of the colored barley will be consumed at home.

William Armstrong, Otonabee, Peterboro': Very little wheat is threshed yet, but the barley is all threshed and is selling now. Some oats have been threshed for feed. There will not be much barley fed this year, as beef is likely to be low.

Dan. Williams, Glamorgan, Haliburton: Threshing is now going on. All wheat raised is needed for home consumption. The same may be said of barley and pease, but of oats there will be a large surplus. Barley is all needed for stock, and a large quantity is stained.

J. C. Hanley, Tyendinaga, Hastings: Wheat is mostly threshed; none marketed; very little surplus. Very little barley marketed. Not much barley fed; although it is low, other coarse grains and beef are low also.

Henry W. Gill, Watt, Muskoka: Threshing is now going on. Not much marketing can be done till winter. Barley at the present price is likely to be kept for home use. Farmers are beginning to estimate it at its true value for feed.

UNDER-DRAINAGE.

It is gratifying to learn that the interest in under-drainage is rapidly extending, and that during the past year the reports indicated a larger increase over the year before in the amount done, as well as in the number of tile yards and ditching machines in operation. Counties such as York, which introduced this form of farm improvement at a comparatively early date, have been continuing the work at a steady pace, and in the new counties of Middlesex and Lambton great enterprise is exhibited. Tile yards in these counties, as well as in portions of Huron and Elgin, were taxed last summer to their full capacity and new ones are opening. A Tuckersmith (Huron) correspondent's statement, that his man on arriving at the yard at sunrise, morning after morning, found thirty to forty teams there before him, furnishes an indication of the vigor with which drainage improvement is being pushed in a few counties. All the Lake Huron counties made substantial progress, though Lambton showed the most general activity. The greatest drawback was the supply of tiles, which for some localities had to be drawn long distances. Stone and lumber are chiefly used in parts of Huron and Bruce. Excepting in Elgin very little under-draining was done in the Lake Erie counties. In the central and eastern parts of Elgin a large amount of tile was laid last season and several machines were employed. Some activity is reported also from localities in Essex and Kent; many parts of Norfolk are sandy and rolling and require but little drainage. In Haldimand and Welland, where it is much needed, almost nothing was done. Middlesex leads the West Midland counties, and perhaps the Province, in the quantity of land improved by under-drainage during the season. Nearly every township shows a large addition to the drained area, and a keener interest in the work was manifested than in previous years. Labor in some localities was scarce, and not many machines have yet been introduced. In Oxford as much draining was done as in any previous year, in spite of a scarcity of skilled labor, and tile was abundant. Brant and Perth made fair progress in draining, and in some townships of the latter county several machines were used. In Waterloo the yards, though busy, were unable to keep up to the large demands made upon them. Skilled drainers were also scarce, but machines were introduced and gave good satisfaction. In a few localities of Wellington much progress was made, but common farm laborers object to digging drains, and in the county generally the work was neglected. South Simcoe seems to be the only portion of the Georgian Bay district which gives much attention to drainage, and there machines have been introduced and much land has been tiled. In North Simcoe stone and wood are used for the little draining that is done. The Lake Ontario counties show a fair record of improvement. In parts of Lincoln the need for under-drainage is slight, but even on the "mountain" where clay soil predominates, little draining was done. In a few localities in Wentworth fair progress was made. Halton reported no draining and Peel but little, except in the eastern part of the county. Markham was amongst the first townships in York to engage extensively in under-draining, and the work there and in a few other localities is pushed both by manual labor and machines, though dryness of the soil impeded work, and tile was not plentiful. In Georgina it has to be drawn a long distance. In parts of Ontario tile was abundant, and in others obtained only by long carriage; and in that county little draining was done during the season, even where needed most. In Durham, Northumberland and Prince Edward, very little progress was reported. In the East Midland counties little draining was done, except in Eldon and Mariposa (Victoria), and in the extreme south of Peterboro' and Hastings. In the latter county a few machines are used, but tile is scarce. Of the St. Lawrence counties Lennox reported considerable progress, in spite of a scarcity

of drainage supplies. In Frontenac tiles are coming into more general use, and machines were introduced in the southern townships where good progress was made last year. In Elizabethtown and Kitley (Leeds and Grenville) considerable work was done, tiles having been brought all the way from Toronto; machines also were introduced. Further east, though under-draining is much required in many sections, Lancaster is the only township reporting any activity. In the Ottawa district progress is reported from Fitzroy, in Carleton, Ramsay, in Lanark, and McNab, in Renfrew. Several tile yards are in operation in these counties. In Muskoka wet weather interfered with work, and little was done. Rubble has been tried in draining here with good results.

FROM THE NOVEMBER REPORT.

Edward Nash, Mersea, Essex: There was quite a lot of tile put in last spring with good results. Tile-draining machines are used. Labor and tile sufficient.

F. Gifford, Camden, Kent: Considerable under-draining; the most I have ever known. The supply of tiles is plentiful and good.

John Wright, Dover, Kent: Not much done here; as this township is very level and depends on surface drainage.

Sheldon Ward, Malahide, Elgin: Farmers are becoming alive to the benefits of tile-draining and are taking advantage of the Ontario Tile-drainage Act, making skilled labor hardly equal to the demand. There is one tile-draining machine in this township and plenty of tile of good quality.

James McClive, Bertie, Welland: Under-draining is but little practised. What few tiles are wanted are imported from Buffalo.

James Lovell, Brooke, Lambton: A great deal of attention is now being given to under-draining. We have here the finest land in the county when it is under-drained; farmers are beginning to fully understand this and are putting in large quantities of tile. Within a circle of six miles we have now four tile yards. More would be done if the supply of skilled labor was more abundant and somewhat cheaper.

R. Fleck, Moore, Lambton: There is considerable under-draining done from year to year. There are three tile-yards in Moore township, which about supply the demand. One tile-draining machine owned by Mr. Nesbit does good work.

Robert Rae, Bosanquet, Lambton: Good progress has been made in under-draining. The supply of tile is quite adequate, and of skilled labor there has been sufficient. A few machines are used to a limited extent.

Thomas Strachan, Grey, Huron: Farmers are rapidly draining their farms. Very little tile used and no machines.

G. Edwin Cresswell, Tuckersmith, Huron: Draining operations have been carried on most vigorously this summer, and if anything will counteract low prices this is one of the means. Tile supply very inadequate. My man reported that although he got to the tile works at 4 a.m. there were frequently from 30 to 40 teams in before him; this was the case during the greater part of the summer, though a kiln was burnt every week. Good drainers are very scarce and there are no machines.

Peter Corrigan, Kinloss, Bruce: There has been a large amount of draining done this season. Tile is used and also lumber. Skilled labor is inadequate to the demand.

Thomas Welsh, Huron, Bruce: There may be a slight falling off in the amount of draining done in this locality. Hemlock lumber is mostly used; a good wooden drain will last 15 or 20 years in clay soil; there would be more tile used, but they are poorly burned. I know of but two tile-draining machines in this township.

Joseph Townsend, Sullivan, Grey: Under-draining is gradually creeping in here and there. There is plenty of tile. Tile-draining machines are used in only one or two places.

George Binnie, Glenelg, Grey: Under-draining has yet to be commenced in this township, though there are parts of it—as clay lands and swamps—that under-draining would render more productive.

James Ross, Oro, Simcoe: About the usual amount of under-draining—perhaps a little more than last year—is being done. Tile is scarce; more would be used if it could be had. Of labor there is an average supply. Farmers cannot employ a large amount of hired labor on account of very low prices for all farm produce. One machine was working this season.

James Farney, Flos, Simcoe: There is a considerable amount of draining this year. Lumber is being used instead of tile, as we think the tile won't stand from lime in the clay. We have one tile machine in use here.

A. H. Secord, N. Dorchester, Middlesex: The farmers in this part are waking up to the necessity of tile-draining, and every year the amount put in is increasing; this year quite a large amount were set in. Tiles are abundant. Machines are used.

C. A. O'Malley, Mosa, Middlesex: Very fair progress is made in under-draining considering the hard times. We make more tile here than in any rural section of Ontario that I know of. They are A 1 quality, and are shipped in large quantities by rail. Machines are used. Henderson Bros. of Wardsville, make one of the best tile machines in use. So-called professional ditchers are numerous enough, but very few of them are to be trusted.

W. D. Stanley, Biddulph, Middlesex: Drainage operations have been carried on more extensively than ever before in our history. Tiles are plentiful; two new yards have been started in the neighborhood. No machines are used here.

James Anderson, E. Zorra, Oxford: A good deal of draining has been done, as the season was dry and favorable. There was sufficient tile, but not enough skilled men. A really good and reliable man can get a job any time. People are getting more particular about draining, as a lot of money has been buried by botches. No machines are used.

Thos. Page, Wallace, Perth: Farmers are making steady progress in draining, though there is no systematic or thorough draining practised. The brick-yards can supply all the tile wanted. We want professional tile-drainers here. We have one of Rennie's tile-draining machines here, but it is only on some lands that it will work.

W. C. Smith, Wilmot, Waterloo: Thirty per cent. more tile was put in this spring and summer than was ever used before. There is a scarcity of large tile at present. We find that small tile in level land will not take the water quick enough. We are using larger tile.

Thos. Mitchell, N. Dumfries, Waterloo: There is not so much under-draining as last year. There is plenty of tile, but the price is too high for the price of wheat. I am afraid skilled labor in that line may be classed as one of the "lost arts." One of Rennie's tile-draining machines is used, and we wish we had a score.

W. D. Wood, Eramosa, Wellington: Draining has made little progress. Good tile has to be brought too far to be convenient. A great drawback is the want of men who understand the drainage business.

Robt. Cromar, Pilkington, Wellington: Draining with tiles is becoming common hereabout, but good men to make drains are scarce. There are brick and tile yards eight or ten miles apart, and more are talked of.

James Cross, Peel, Wellington: Farmers are beginning to find out that they must drain their land or else sell out. About 100 per cent. more was done this year than last. Tiles are in adequate supply. There is a machine, but it does not do much here.

James Reith, East Luther, Dufferin: Considerable progress has been made this year. No tiles are used, but some stone and some wood. There are machines in this locality.

John Blasdell, Beverley, Wentworth: Farmers have been alive this year in the matter of draining. Tile is sufficiently supplied. A few machines. A few tile-draining machines are used, and they give general satisfaction.

Arch. McKinnon, Caledon, Peel: Considerable under-draining has been done. Some have drained from one hundred to two hundred rods on their farms.

Wm. Porter, Toronto Gore, Peel: Quite a number of our farmers are doing some under-draining. We have two tile-makers within a distance of ten miles. Their make is all used up. We have two or three tile-draining machines in the neighborhood.

W. W. Findlay, Scarboro', York: Some under-draining is being done. Clay land, except near the surface, has been too hard to make progress. Supply of labor is limited; men will not dig when the ground is hard. I only know of one machine in Scarboro'.

Angus Ego, Georgina, York: Under-draining is rather slow in progress owing to the long distance we have to haul tile. Men who understand the laying of tile properly are not numerous. There are no tile-draining machines in this part yet, but in many parts of this township they would work admirably.

Lafayette Weller, Scott, Ontario: Under-draining is on the increase, but slowly. Tile has been supplied by hauling about 26 miles.

John Foott, Hope, Durham: Not much progress is being made in under-draining. There is plenty of tile, but labor is too high. There are no draining machines in this locality.

Louis P. Hubbs, Hillier, Prince Edward: Not a rod of drain has been laid that I know of. No tile to be had; they would be largely used if available.

E. R. Sills, S. Fredericksburg, Lennox: Very good progress made. Supply of tile adequate, with sufficient skilled labor. No machines used.

R. J. Dunlop, Pittsburg, Frontenac: There has been considerable under-draining this year; a good deal being done with stones and also with boards. There have been a good many tiles laid where there were none used before. The supply, I think, was sufficient. Labor is done by the farm hands generally.

W. A. Webster, Lansdowne, Leeds: I am sorry to say again that there is no progress. Not one tile yet in our township, and there is not a township in Ontario that needs it more.

Alex. Farlinger, Williamsburg, Dundas: They do not practice under-draining here; open drains are preferred.

A. Abbott, Elizabethtown, Leeds: More under-draining has been done than I ever knew of before. No tile is made here. Most of it comes from Toronto. Labor sufficient.

James Cattanach, Lancaster, Glengarry: A good deal of under-draining is done every year, but small in comparison to what is really needed.

R. Serson, Fitzroy, Carleton: Considerable under-draining has been done on account of the backward wet spring of '85. Tiles are plentiful, and tile-draining machines are used, but give poor satisfaction.

P. R. McDonald, Osgoode, Carleton: Not very much has been done, the season being too wet. Hemlock lumber is used.

W. P. Taylor, Fitzroy, Carleton: Considerable progress is being made in draining. The supply of tile is good, with labor and machines.

Peter Anderson, McNab, Renfrew: More draining done this year than has been done—say these three or four years. We have a tile factory within three miles. One tile-draining machine came to the township this fall.

Wm. Patterson, Ramsay, Lanark: Drainage is far behind, but farmers are beginning to wake up to its benefits. Tiles are now to be had, but hitherto the supply has not been up to the demand. Draining machines are not in use here.

F. Birdsall, Asphodel, Peterboro: Very little has ever been done in this township, and drain tiles are being made for the first time this year.

D. Kennedy, Otonabee, Peterboro: Considerable draining has been done. The supply of tile is sufficient. Tile-draining machines are used.

John Hollingworth, Watt, Muskoka: Draining this fall impossible. I have had a drain partly dug for the last six weeks, but cannot do anything with it on account of water.

Henry W. Gill, Watt, Muskoka: We notice a little being done in rubble draining, and that giving good results.

GENERAL REMARKS.

The following extracts are taken from the general remarks of correspondents:

FROM THE MAY REPORT.

John Hooker, Mersea, Essex: We have had a very favorable season for doing spring work, and the land has been in the best of condition for putting in the seed. There is a large amount of corn planted at the present date, and if the weather holds favorable the bulk of it will be planted next week.

J. H. Morgan, Anderdon, Essex: Bad times; every one grumbling and a great many seeking work. A great many of our people are leaving for Dakota.

A. M. Wigle, Gosfield, Essex: We are thankful to the Bureau for their reports, which aid us very much in proportioning the various kinds of crops to the probable demand.

Wm. McCormick, Pelee Island, Essex: It has been rather a soft winter and the spring has been good except one storm in April, which was the worst ever known in this place. Since that time the weather has been fine and vegetation is very forward.

Henry Morand, Sandwich E., Essex: There is a bright future for the tiller of the soil, provided he devotes a part of his leisure hours to studying the wants and necessities of his farm. The secret does not lie simply in sowing, but proper care should be given in draining and manuring his land. Many farmers are going to bankruptcy only by not attending properly to their farm. Another great drawback in this part of the country is that we have no shipping contractor.

W. McKenzie Ross, Harwich, Kent: My study during the last twenty years is fruits and flowers. Of the latter I imported from the old country 40,000 plants, besides 50 new apple trees, 55 pear trees, 50 plum trees, 12 varieties of quince trees and medlers, 200 English gooseberries, 20 different sorts of English violets, and 1,000 roses; and while horses, bulls, boars, rams, cocks and what not are entered free of duty, poor W. McKenzie Ross had to pay his 20 per cent. I placed the matter before the Minister of Customs twice, but no use.

Alex. Young, Harwich, Kent: Farmers in this section have depended too much on fall wheat, and now that the prices have gone so low and the crops are a partial failure they are suffering the consequences. However, some are turning their attention to stock of various kinds. Land has decreased in value. A farmer was telling me lately that three years ago he was offered $10,000 for a hundred acres by two parties; he is now offering it for $8,500 without a purchaser.

A. J. C. Shaw, Camden, Kent: I would say that the late boom establishing Farmers' Institutes throughout the west is not having very much success in bringing the farmers to see the necessity of proper care of their stock. I see many of them in this locality, who were foremost in establishing the Institutes, are letting their cattle, hogs, etc., pasture on the highways with full privilege of scrub bulls, etc.

J. Hally, Aldborough, Elgin: Aldborough suffers from the want of pure bred male animals. I asked the assessor this year to endeavour to furnish me with a list of pedigreed animals in the township when he got through. His reply was, "I don't think there is a pedigreed bull in Aldborough."

Jabel Robinson, Southwold, Elgin: The lectures delivered throughout the county at the various Farmers' Institutes on permanent grasses, by Professor Brown, has stimulated the farmers to seed down more or less to permanent pasture. The question often arises: From whom can these various grass seeds be obtained and relied upon? [Top-dress liberally with good manure, and native grasses will give you the best of permanent pasture.]

Robert Watson, Windham, Norfolk: The oldest inhabitant says that he never saw wheat, grass and fruit trees in these parts look better at this time of the season; but as he is always called a big liar you will not be likely to take much stock in what he says. Yet it is seldom things look better in the interest of farmers than they do at the present time.

John Machon, Charlotteville, Norfolk: The stock of horses and cattle are, with very few exceptions, poor; the farmers don't seem to encourage first-class stock. Last summer the grasshoppers and the early frosts destroyed much of the clover, and this spring the hoppers are already on the war-path. The corn did

not ripen good; it was late coming in spring, and in many instances farmers planted two and three times. The wet fall kept it moist, and it was harvested in bad condition generally. All fruit trees look splendid, and promise abundantly.

V. Honsberger, Cayuga S., Haldimand: This season has proved again the importance of shelter for fall wheat. Wherever a field is sheltered by woods or any other means, the wheat is first-class, but in unsheltered places, no matter how good condition the soil was, the crop will be almost a failure.

Wm. Mussen, Seneca, Haldimand: Times at present are dull, and the prospect of farming operations is anything but encouraging. Produce and cattle are low in price; demand is not brisk, and buyers get them at their own figures.

Jas. McClive, Bertie, Welland: This has been the finest spring for forty years; warm and plenty of rain. I find by experience that all the trouble in not getting a good crop is for want of properly feeding the soil. In the case of fall wheat, if the land is rich the weather does not check growth of the plant, and, like stock, if well fed, will always give good results.

John Morrison, Plympton, Lambton: The spring has been favourable for getting along with spring work. The morning of the 8th inst. we had quite a hard frost; it has done some damage to grape vines. Since the 25th April the spring has been one of the finest, temperature continuing the evenest I have ever known in a residence of fifty years in this country, and vegetation is the furthest advanced.

Joseph H. Patterson, Dawn, Lambton: I will venture one general remark here that I have often made orally, and that is, that I have never seen a place where horses, cattle, sheep, pigs and poultry are so healthy and so free from contagious diseases as in this part of Ontario. We have no hog cholera, no chicken cholera, no gapes in chickens, and yet most of the farm animals have to rough it to a considerable extent.

James Thompson, Warwick, Lambton: Fall wheat in exposed sections, not protected by trees, is badly killed, showing the necessity of wind-breaks, and also need of drainage.

James Mitchell, Howick, Huron: There are not one-fourth of the laboring hands that this township once contained. Hard times and low prices seem to cause farmers to economize; to do all they can and hire none. The most important question in this sheet is in connection with the wheat question. The loss that this county sustains is certainly not less than ten per cent. on the whole wheat area, and the cause, nine times out of ten, is the lack of drainage.

John Anderson, East Wawanosh, Huron: There has been quite a demand this spring for horses of all classes, and at good prices, chiefly American buyers. Milch cows are also in good demand at fair prices.

Edwin Gaunt, West Wawanosh, Huron: Another lesson has been given to our farmers upon the vast importance of under-draining, by the appearance of wheat and clover on drained and undrained lands respectively. It would appear that wheat sown on well tilled and under-drained land is guaranteed a bountiful crop, while on the other hand our poorly tilled and undrained land it is hit or miss, with ten chances to one you will miss it. This method is decidedly unprofitable, as our work gives no adequate return.

Wm. Welsh, Huron, Bruce: It is evident that we cannot have early pasture, unless our land is under-drained and pastured less in the fall.

Wm. Mackintosh, Arran, Bruce: Farmers, on account of the times, are not engaging many hands, hence the supply is sufficient. A larger area is under hay and grass for pasture than usual, and farmers will not require as many hired hands. They are paying more attention to stock raising than they did when wheat was $1 to $1.25 per bushel.

Peter Clark, Culross, Bruce: The farmer is still under and subject to the union man, the combination man and the association man. When will he shake himself, Samson-like, from all the shackles or servility under which he labors and demand his right? When? Till he does so he is the slave and dupe of the politician and the capitalist. If he is the bone and sinew of the country, will he ever show it?

Wm. Milne, Osprey, Grey: Trees, out the third season under the tree planting Act, are doing remarkably well, and we have quite a number of them in this township. Last fall there were enormous flocks of black birds. I have seen shooks and standing grain injured by them. They are here again this spring in great numbers, and I have seen some fields which were sown with white oats appearing as if newly sown with empty hulls. Doubtless they attack other grains, but the effect is not so visible. I would like to get a book on Canadian Ornithology and think the Government ought to issue one if it has not done so. I never met a Canadian who could tell me anything about Canadian birds, except, perhaps, the robin.

John Black, Bentinck, Grey: The farmers here need a new variety of spring wheat. We have two kinds, goose and white Russian. The goose wheat yields well but makes poor flour, and the white Russian is veay liable to rust. I think a hard spring wheat, like the old Fyfe or Glasgow, would be a great improvement on our present varieties.

John Lennox, Innisfil, Simcoe, Prospects look very blue for farmers in the meantime; produce of all kinds cheap and very little demand. Horses are the only commodity a farmer can sell.

Charles Cross, Innisfil, Simcoe: This has been the earliest season for growth for a great many years, but a bad spring for farm work. The land is wet, not fit to work on. A great amount of the crop has been put in too wet, and a lot to put in yet. It rained heavy last night and is raining now, and this will delay seeding nearly a week.

George McLean, Oro, Simcoe: It has been a very fine early spring, with but little frost so far. The maple sugar season was cut short by the early spring, consequently little sugar or syrup was made.

Charles Jas. Fox, Delaware, Middlesex: A remarkable spring for the very early growth. Garden pease in full bloom; forest trees are now as forward as they were last year on the 1st of June. Grass for pasture was good on May 1st—better than it was last year on the 15th.

S. P. Zavitz, Lobo, Middlesex: Help in the house very scarce. Any Government would confer a great boon on our women which would supply, by importing or otherwise, help in the house.

R. Coad, Ekfrid, Middlesex: In making remarks of a general character, I would go outside of the subjects above reported. I would take the subject of "Roads" as one deserving and requiring the attention of farmers at the present time, as successful agriculture can scarcely exist without good roads. We began to gravel some of our leading roads, by laying out our share of the surplus, as we called it, distributed by the Provincial Government. Then the municipal councils followed suit, and private supplement followed, and soon we got proud of our roads. But we are now sorry to see all our efforts of no avail, by reason of the heavy loads hauled over them in the soft state in which they were in March and April, with narrow tires, which cut like knives, and tear the road to pieces. A law should be made to compel the use of wider tires at such time of year. And it is just as much needed on the farm as on the road, for various purposes. Space too small to do justice to this subject.

W. Sutherland, Ekfrid, Middlesex: I have for a few years kept a record of the date of the wild plum showing blossom, as an indication of the earliness of the season. It is not quite complete, but shows the season to be twenty-five days earlier than that of 1873:— 1870, May 2; 1871, April 27; 1872, May 7; 1873, May 19; 1874, May 13; 1875, May 18; 1876, May 15; 1877 and 1878, (wanting); 1879, May 11; 1880, May 3; 1881, May 9; 1882, May 9; 1883, (wanting); 1884, May 10; 1885, May 17; 1886, April 24.

Adam H. Secord, Dorchester, Middlesex: I notice that where the land is well tile-drained the fall wheat looks fairly well, but even on high and rolling land, where not drained, it looks sickly. I am of opinion that our only salvation from failures of fall wheat is in tile-draining.

W. Lee, W. Nissouri, Middlesex: Farmers are going more into raising stock and supporting cheese factories. They think this pays better than ploughing and sowing—with low prices and uncertain returns.

Daniel Burt, Dumfries S., Brant: By improved machinery, especially the binder, and a better knowledge of farming, the farmer has more control over the farm operations than formerly, and can regulate to some extent the demands of labour, accomplish more by the same labour in a shorter time and better than a few years ago.

Thomas Page, Wallace, Perth: The creamery (Laval Separator) is going to supplant the cheese-making interest here. Farmers are giving it a hearty support.

Thomas J. Knox, Elma, Perth: This is the 10th day of May, and seeding is nothing like half through. Some have not commenced at all. The land is not fit to go on. Of course this is an exceptionally low part of the country, requiring more drainage—that is large outlet drains—than what the farmers can afford. Taxes are very high on account of bonusing railroads to such an extent. Still we hope for better times.

Charles Masson, Eramosa, Wellington: This has been a very wet spring, and in some places where the ground is low the seeding is not yet finished. This season is remarkable for the quantity of blossom on the fruit trees. There are complaints of a great many young colts dying.

Charles Nicklin, Pilkington, Wellington: The season will likely be remembered by the farmers for a good while, opening as it did by the middle of April, with an immediate active vegetation and nothing in the way of cold to retard its advance up to the 16th of May, and then only one frost of any account. And yet, seeding will not be entirely finished before the 1st of June. Cattle to pasture with plenty of feed by the 7th of May; have not had the like since 1869 or 1870. Early fall wheat already (May 20th) pretty well barrelled and looks as though the head might show in about a week.

Thomas Mitchell, Dumfries North, Waterloo: The general complaint among farmers is that rents and wages are too high for the price of farm produce. But we keep moving along in the same old rut. What we all want is better drainage work, and get more into pasturage.

Richard Blain, North Dumfries, Waterloo: Our prospects are good for crops this season, excepting wheat in low lying lands. Although farmers are a little despondent about the prices of grain and cattle being low, yet our Ontario farmers are in a much better position than any others on this continent, or in fact any other country I can learn about. We are so far free from floods, cyclones, and many other trials that our friends to the south of us have had.

George Walker, Clinton, Lincoln: Where there is a poor field of winter wheat here it is caused by bad farming, not sufficient attention being paid to rotation of crops. Winter wheat following winter wheat will not do. What rye is grown here is for the straw to bind up corn stalks. Spring wheat on fall ploughing is good. Spring ploughing is very backward on account of such heavy rains.

Robert Shearer, Niagara, Lincoln: Judging by the rate at which planting has gone on the past two years—and the present is even more extensive—the front of this township for three miles back from the river and lake, the whole length of the township, will be one vast peach orchard. A thunder storm and soaking rain last night and this forenoon have sent the seeding back indefinitely again, as the land is soaked.

John Shaw, Esquesing, Halton: There will be quite a number of self-binders introduced around here again this year. A great many are holding back until they are lower in price before buying. If the manufacturers would only reduce the price of binders to a reasonable amount, I have no doubt whatever that there would be quite a boom on binders, as every farmer can comprehend the advantage of using them for reaping the crop.

Colin Cameron, Nassagaweya, Halton: The outlook at present for the farmer is much the same as last year. The prices of grain and beef keep low, but the farmers are economizing and trying hard to weather the season of depression. Many farmers are building this year, owing to labor and material being reasonable. Farmers are working their land much better than a few years ago, and the Experimental Farm being near, is having a good effect, both as to cropping by a system of rotation, and in caring for and feeding cattle. Many even feed steers coming two years old, it being more profitable than keeping until three years. We learned that from Prof. Brown.

J. D. Evans, Etobicoke, York: The feeling here is that the anti-immigration agitation is overdone. There is a general complaint among farmers of the scarcity of good farm laborers, and if it continues there will soon be a cry for more active immigration measures.

Benjamin F. Brown, Thorah, Ontario: Farm labour is too high for the price of grains, and binding machines are held out of reach of small farmers.

Christian Nighswander, Pickering, Ontario: Very forward season; prospects of a good crop in general, except fall wheat which is nearly a total failure. Bees wintered well, flying very strong in April; sign of early swarming.

Robert C. Brandon, Brock, Ontario: Farmers throughout this section are always anxious to see the well compiled crop reports of the Bureau.

R. Windatt, Darlington, Durham: There was little or no profit from farming operations in this neighborhood last year.

Platt Hinman, Haldimand, Northumberland: I think there is no other source that so much reliable information can be obtained as through the Bureau report—information from different localities of different products.

Smith Hinman, Cramahe, Northumberland: One farmer across the road from my place is working one hundred acres of land all alone, preferring to do what he can that way rather than pay so much for labor when everything is so cheap. As for female help it is almost impossible to get it at all, as the girls go across to New York in preference to staying here.

W. J. Westington, Hamilton, Northumberland: Farmers begin to see that they cannot now compete with other wheat producing countries; therefore they have turned their attention to the production of coarse grain, seeds, stock raising, dairying, etc.

J. B. Aylesworth, vicinity of Newburgh, Lennox and Addington: Laboring men, with families in the village, frequently work for the neighboring farmers by the day.

M. Spoor, Wolfe Island, Frontenac: On the labor question rests the future prospects of agriculture. At present the laborer may be termed the master, and while our legislators lie dormant in the face of such outrages as are perpetrated there will be no predicting what the end will be.

Thomas Andrew, Kennebec, Frontenac: I have been in Canada over twenty years, and never witnessed a finer spring since I left England. I commenced sowing grain this spring on Easter Monday, 26th April, and some of my neighbors a few days earlier. Last spring I sowed my first grain on the 12th May. There is more grass, and the grain looks better now than at the first of June last year. If no great drouth, the prospects are good.

Wilhelm C. P. Plotz, Clarendon, Frontenac: A good deal about thistles and other weeds has been written, and laws have been passed to prevent the weeds from spreading. In fact so much has been said, that one would think that if a farmer is troubled with weeds he would take a bundle of these writings and laws about killing weeds and read them aloud, when walking through the fields, and would thus kill everything obnoxious to him. But if that does not kill the weeds, then let him go to work, pull, hoe and plough wherever a weed makes an appearance. Keep the seed grain clean, and in a very short time you will have a clean farm.

John Ferguson, Wolford, Grenville: On the whole, the outlook for the farmer is not very promising. Produce of all kinds is at prices that will not pay for production at the present price of farm labor. Dairy products have got so low that it will not pay for milking cows.

Thomas McDowell, South Gower, Grenville: If I mistake not the years 1879, 1880 and 1881 had dry summers; then was the time of light crops of hay, short crops of oats, and dried-up pastures. Farmers sold off their cattle and went raising rye and fall wheat. Rye sold as high as 93 cents per bushel. Now this has all changed. In 1882 the rye crop failed. The seasons had changed. Then people began to go back to raising hay and oats, horses and cattle. Also, I notice, that less sheep are kept than in dry seasons. I think an early spring and an early harvest a great good to the farming community.

Wm. A. Webster, Lansdowne, Leeds: We have been breeding Percheron horses here for the last three years with good results, and are just now commencing to breed Clydes in addition. The great work now to be encouraged by the Bureau and the Government is thorough under-draining of the land, and breeding from pure bred male animals. "There's millions in it!"

Wm. Hawkins, jr., Stafford, Renfrew: I think this township would be much improved if we had better stock and paid more attention to farming and less to lumbering; also, less ground sown, grain better put in the ground, and more draining done.

J. M. Kennedy, Alice, Renfrew: The lumber operations spoil the farmers here for farm hands, as they can afford to pay higher wages, and young men prefer going to the woods before working on a farm.

H. A. Schultz, Sebastopol, Renfrew: Spring opened this year on the 8th of April, the weather growing warm suddenly. From the 14th of April to the 24th inclusive it was more like June than April. The thermometer has ranged from 60° to 90° in the shade; the season is about three weeks ahead of any year this last 18 years. The spring of 1867 was similar.

Theodore Wasmund, Raglan, Renfrew: A railroad badly needed here; nearest station is fifty miles off.

John M. Cleland, Darling, Lanark: Female help is scarce and wages high. Can no means be devised for bringing into this part of the country a number of immigrants? I have often spoke of this, but nothing was done.

Peter Guthrie, Darling, Lanark: Females' wages, per month, from $8 to $10, with board.

Thomas Smithson, Fenelon, Victoria: This spring has been the earliest and most lovely for many years. All kinds of crops and fruit trees have a most promising appearance to date, 15th May. There have been no severe frosts since the snow went off, not even hard enough to hurt the tenderest plant.

Amos Howkins, Eldon, Victoria: A few of our most enterprising farmers have planted out this spring and last fall a fine lot of young maple trees; not a great quantity to be sure, but enough to add greatly to the attractions of home, and enough to repay the planter many times its cost in beauty alone, for "a thing of beauty is a joy forever," and is worth striving for, even on a farm.

George Stewart, Otonabee, Peterborough: The price of almost all kinds of farm produce has been low, and the yield last year was very poor; consequently, a great many of the farmers in this section are very much behind.

D. Kennedy, Otonabee, Peterborough: This spring opened about three weeks earlier than last. This is the ninth favorable spring in the last twenty-one; 1866 was about the same as this, followed by a fine summer and splendid crops. In 1868 it was still earlier; work commenced about the 1st April, followed by a fine growing summer. In 1871 work commenced on the 8th April, followed by a dry summer, light meadows, and good wheat. 1877 commenced on the 10th of April; fine spring, dry summer; fall wheat good; meadows a failure.

D. Galloway, Lutterworth, Haliburton: The spring has been very fine; remarkable for rapid growth and absence of heavy storms. The prospect for the agriculturist is good; some good homes obtainable at from $100 to $400, according to improvements, on time.

D. Kavanagh, Dungannon and Faraday, Hastings: This is a lumbering county and in winter time men are all employed in the shanties at good wages. No scarcity of work in summer; road making and other work keep men employed. Plenty of free grant lands to be got, and a chance to make a good home.

Thos. H. Blanchard, Sidney, Hastings: The spring on the whole has been wet, and slow progress has been made in getting in crops; teaching us by the best of teachers, experience, the necessity of drainage.

James McDonald, Stephenson, Muskoka: As a general rule, the best land in this district are the flats along the creeks and rivers, but they are undeveloped for lack of drainage. So that as to a grain crop, the farmer on light, sandy soil very often gets ahead of his neighbour on a damp clay loam.

W. T. Openshaw, Stephenson, Muskoka: I have been in Muskoka over five years and find this year the most forward, having had a very long spell of hot weather, with scarcely any night frosts and little rain. Lake opened about 23rd April; cattle out in bush before that date; have not seen grass so forward since I came to Canada.

A. Wiancko, Morrison, Muskoka: A good many parts of this township have suffered by floods. The outlets of Lake Couchiching have been deepened, and since all the waters have to pass through here, and the outlets of Sparrow Lake not correspondingly widened, we are greatly injured.

Albert H. Smith, Monck, Muskoka: When is the Government likely to pay compensation to the farmers for flooding their lands? Why should we pay this annual tribute to saw-log men?

Hugh Jackson, Humphrey, Parry Sound: This has been the driest spring I have seen since I have been in the country. It has not rained hardly enough to lay the dust on the road since the snow went.

Owen Duross, Oliver, Algoma: This place being quite new, farming is only making a start as yet, but is improving fast.

FROM THE AUGUST REPORT.

J. Robinson, Southwold, Elgin: It seems to me that the cry against the Dominion and the Ontario Governments, for assisting immigration, is fallacious, and a bid for the labor vote of towns and cities. There never was a time in Canada when good agricultural laborers could not find employment, if willing to work for a fair remuneration.

R. Fleck, Moore, Lambton: The season has been one of the driest and coolest I can remember to have experienced, yet the yield of hay and most cereals will be surprising where the land has been well drained and otherwise properly cultivated and grain sown early.

W. W. Revington, Biddulph, Middlesex: I think the information furnished by the reports of the Ontario Bureau should be interesting and profitable to every farmer. They supply much reliable information from every part of the province, showing what crops, if any, suffered, and from what cause; also what the various farmers and stockmen deem the most remunerative in the various parts of the province, and their reasons for such preference. This is very interesting to other farmers.

Andrew Wilson, Ramsay, Lanark: You ought to urge upon agricultural societies the importation of seed wheat from Manitoba. The wheat we bought was frozen, and some people objected to sowing it, but it grew just as well as the best seed, and was the purest I ever saw.

Thomas Frood, Sudbury, Nipissing: Crops look very well for the time in. Frost has done very little harm, and we have cool nights and frequent showers. Wheat is very fine in promise, hay is excellent, and new potatoes are more plentiful though planted in June. Mining is being carried on by the Canada Copper Co. with about fifty men, and a large quantity of lumber has been taken in for building. A branch railway over two miles long has been located, and everything is done with a view to permanent operations.

FROM THE NOVEMBER REPORT.

Henry Morand, Sandwich East, Essex: There is a great reform made amongst farmers in tilling their farms and putting their lands in proper shape. A great encouragement is given by our fairs, and the offer of prizes for the best 25 acres wheat, 25 acres corn, 25 acres barley and 25 acres oats, made by Hiram Walker & Sons, Walkerville, has a first-class effect on farmers.

James MacFarlane, Dover, Kent: Peaches and grapes are mostly a failure, by the severity of late winters and by long drouth of last summer. None of the finer fruits can be saved in this vicinity from fruit thieves. Farmers are much plundered by thieves. We need efficient rural police.

John Wright, Dover, Kent: Taking everything into consideration, the summer of 1886 has been a remarkable one, for, in my experience, I have never seen so good a sample of grain with so little rainfall. Since filling up the schedule on the condition of barley, I find the sample is not so good as I expected, caused by mowing and stacking too soon, and early threshing, causing sweating in the granary.

Jabel Robinson, Southwold, Elgin: The wire-worm has done more injury to the crops in this section than all the other insects, and should any of your correspondents know a remedy whereby they might be destroyed, and would make it known, a great boon would be conferred on the farmers of this part of Canada.

James Davidson, Yarmouth, Elgin: For the grub and wire-worm pest, salt, about two to three hundred pounds per acre, seemed to have a good effect when sown in time.

James McKnight, Windham, Norfolk: Marketing of all kinds of grain is very dull, owing to low prices, and the dealers do not seem to want to venture. There is a large quantity of last year's wheat in the store-house, so much so that some of the dealers have not bought any this fall yet. They cannot get out without a heavy loss.

J. R. Martin, North Cayuga, Haldimand: The county seems fairly prosperous, but the low prices of wheat, wool, and other farm produce seems to benumb the farmers' wonted energy.

C. Riselay, Bertie, Welland: The crop of the present year, with the exception of hay, has been below an average, but of good quality. The prospect of the next wheat crop was never better at this season, still there is much dissatisfaction among farmers, owing to the low price of almost everything that farmers have to sell.

L. Buckton, Crowland, Welland: The combinations amongst the manufacturers of machinery for farm use and the low prices of farm produce, together with the high rate of taxation, will have a tendency to cause a great many to dispose of their stock and property and seek a living from some other source, as the present state of affairs with the farmers cannot hold out very long.

Robert Rae, Bosanquet, Lambton: The farming industry is very much depressed, on account of the low price of grain and stock, and the large amount of money farmers have to pay for farm implements and hired help.

Thomas Strachan, Grey, Huron: There have been excellent crops this year in this township. All kinds of produce have done well. The only drawback is the low prices, except in cheese. It is hard for farmers to make ends meet, owing to the very low prices in everything.

John Douglas, Arran, Bruce: Canadian farmers want free trade with the United States, so as to get a greater price for wool and barley, and receive in return plenty of American corn to make beef for the English markets. Every facility ought to be given farmers to increase the trade in fat stock, and to diminish the export of store cattle.

John Black, Bentinck, Grey: Spring wheat has been a failure again this year, although it was not injured by rust. I think there is very little use sowing White Russian or Lost Nation any more. We want a change of seed. It will pay any farmer better to sow pease, oats, or barley than spring wheat.

Thomas Kells, Artemesia, Grey: Now that another year's crop has been harvested and threshed, farmers are more than ever convinced that it is not profitable to continue sowing spring wheat unless new varieties of seed be procured, or a fresh supply from a distance of those varieties which have already proved suitable to our soil and climate. I sowed on my farm here last spring one half bushel of the old Red Fife, which was grown near Moosejaw, N.W.T., in 1885. It did well, yielding about one-third more than the White Russian sowed alongside. I likewise got pease from the same place, which did exceedingly well; I had five bags from half a bushel of seed.

W. H. Free, St. Vincent, Grey: There is scarcely any doubt but farmers will in the future direct their attention to raising stock, as prices are so low it will not do to run down their farms raising grain. Even should the meat market not be very high, stock-raising will tend to keep the soil in a higher state of fertility.

Peter Bertram, Orillia, Simcoe: The farms that are not drained have suffered a good deal this year. The water kept on them so late in the spring that seeding was late, and in consequence harvest was late, and the late harvest was wet, and in many cases grain sprouted, causing serious loss.

George Sneath, Vespra, Simcoe: The prospects are, in this section of the country, that farmers are going to experience a trying winter; a great many will not be able to make ends meet. Debts, rents and taxes must be paid, and the source from which it was expected the needful would come—fall wheat—has failed.

James Anderson, East Zorra, Oxford: On the whole, a year of good crops, but prices of grain are ruinously low, in fact in many instances below cost of production. Cheese has done better, and if the fall make brings expected prices will be rather a good season for dairying.

James Spence, Blanshard, Perth: Under-draining is not carried on to such an extent as it ought to be, mostly for want of money and the high rates of interest on small amounts.

James Cross, Peel, Wellington: I may say that this season's crop is a good average in this township, and farmers, notwithstanding the low prices prevailing, are not grumbling so much as in other years. We are trying to drain the land to make it produce better crops if possible.

Edward Irvine, South Grimsby, Lincoln: Crops are lighter and prices of wheat lower than last year. Feed for stock will be scarce and dear before spring. Cattle are now very cheap owing to many farmers trying to sell on account of lack of fodder.

A. G. Muir, North Grimsby, Lincoln: I would suggest that the Bureau ask for a more detailed report on various kinds of fruit, as to the amount of each shipped to other localities and countries from each municipality. Also whether the municipality has a by-law prohibiting cattle running at large, and if so, whether result is satifactory or not, and why.

Colin Cameron, Nassagaweya, Halton: The continued depression causes farmers to be very careful at present, and may be seen from the fact that they are purchasing store cattle at a much lower rate than last year, and if they cannot get them at a low price they leave them alone, on account of the prospects of high prices for beef cattle being poor at present. There is plenty of fodder and coarse grain in this vicinity to carry stock well through the coming winter.

W. H. Proctor, King, York: It is my opinion that if produce doesn't get up in price, rent and wages both will come down, or, of the tenant farmers, a good many will go to the wall. Farms have decreased in value about twenty per cent.

R. S. Webster, Scott, Ontario: Many of the farmers of this township, and county, in fact, are desirous of forming or organizing a Farmers' Institute, and express themselves at loss as to how the initiatory steps are taken.

Wm. J. Grandy, Manvers, Durham: We have been blessed with an abundant crop this year. A great improvement has taken place in the township of late years in the breeding of stock, both of horses, cattle and sheep.

W. J. Westington, Hamilton, Northumberland: Farmers finding that over-cropping is injudicious, have resolved to keep a larger and better grade of stock, and are making better arrangements for wintering them by providing stone stables and other suitable accomodation.

W. A. Webster, Lansdowne, Leeds: I hope the Bureau will do all it can to encourage under-draining. Nothing else will add as much to the value of land in the St. Lawrence valley.

Alex. Farlinger, Williamsburg, Dundas: Farmers are well satisfied. No complaints, except the low prices for their productions. In this section there is an immense amount of open, large drainage being done and land cleared for pasturage. The drainage is being done under the Act of 1883, which proves very satifactory.

James Collison, Matilda, Dundas: I would like if some of your correspondents would explain the cause of blight on apples,—that is, the black spots.

James Clark, Kenyon, Glengarry: We have any amount of grass fed cattle, but very little demand, being dependent entirely on Montreal market, which at best is but a poor market. Sheep and lambs have done well here this year.

Neil Stewart, Goulbourn, Carleton: The crops grew very rank. Late oats and wheat rusted badly, and pease were covered with mildew. There was a storm of hail crossed over a corner of this township, and those thus unfortunate were left nothing but what was secured before.

Thomas Roche, Hagarty, Renfrew: Good drainage and early sowing gave the best results.

Andrew Wilson, Ramsay, Lanark: The wheat we raised from from the seed we brought from Manitoba, which I mentioned in the last report, has done very well. We can beat Manitoba samples.

William Ramsey, Mariposa, Victoria: All the early sowed grain of every kind is the best, turns out the best and weighs the best, only the early barley was colored the worst on account of the wet rust as it was about fit to cut. Late spring wheat was damaged some by rust and weevil, which shows that under-draining, allowing them to get on the land early in the spring, will pay.

James McDonald, Stephenson, Muskoka: The country being new the farms or clearings are mostly small and after supplying the families the amount of grain to export is very limited. A number of the farmers or members of the family work out for the support of those improving the farm.

John Hollingworth, Watt, Muskoka: The whole of present month and last three weeks of September have been very unfavorable for late harvesting and fall ploughing, the land as a rule being sodden with water. From the 7th to the 30th September, we had rain on 14 days, and we have had rain on 12 days this month, and expect it to rain again to-day.

J. M. Ansley, McDougall, Parry Sound: Year after year proves the advantages of this district for cheaply producing beef and mutton. Those farmers who have devoted themselves to these industries are reaping a rich reward. There is still a largely increased opening for this industry, and we would invite the attention and examination of those who are living on highly rented farms elsewhere to the advisability of becoming possessors of their own homes.

Thos. Flesher, Assiginack, Algoma: This island is best as a stock rising district; not suitable for general farming.

STATISTICS OF

THE WEATHER AND THE CROPS.

THE WEATHER.

TABLE No. I.—Showing for each month the highest, lowest, mean highest, mean lowest, and mean temperature at the principal stations in Ontario in 1886; also the annual mean for each station.

	Temperature.	Windsor.	Goderich.	Simcoe.	Stratford.	Hamilton.	Toronto.	Barrie.	Peterboro'.	Cornwall.	Pembroke.
		°	°	°	°	°	°	°	°	°	°
January.	Highest	50.5	49.0	50.0	48.0	53.8	47.3	46.1	47.0	49.5	39.6
	Lowest	−5.1	−5.7	−5.0	−13.2	−7.5	−13.8	−20.4	−28.0	−23.8	−34.7
	Mean highest	28.5	26.1	28.9	23.9	29.7	25.9	22.6	22.7	22.2	17.1
	Mean lowest	13.3	14.9	13.3	11.8	10.9	11.4	4.0	3.2	6.6	1.7
	Monthly mean	21.4	20.3	22.0	17.6	21.7	19.2	15.1	14.6	11.8	8.4
February.	Highest	55.6	45.3	45.0	42.8	48.8	41.7	43.4	44.8	43.9	39.6
	Lowest	−11.0	−15.7	−17.0	−21.3	−14.7	−22.8	−28.9	−26.0	−25.3	−31.7
	Mean highest	32.9	26.6	28.1	23.4	31.9	25.9	23.7	25.1	21.2	19.6
	Mean lowest	13.9	11.8	11.6	9.0	10.4	10.3	2.8	3.8	1.3	−0.1
	Monthly mean	23.6	19.9	20.6	17.7	21.7	19.0	14.7	14.9	12.1	8.7
March.	Highest	63.5	56.1	54.0	53.8	55.8	53.9	47.6	55.0	53.2	48.6
	Lowest	5.0	−6.7	−4.0	−9.8	−4.5	−7.3	−16.8	−15.0	−18.2	−19.8
	Mean highest	43.6	35.1	36.6	34.2	39.1	35.7	34.7	35.9	31.1	33.4
	Mean lowest	23.9	22.4	24.1	20.8	21.6	24.1	18.7	18.6	14.7	14.4
	Monthly mean	32.9	28.9	30.7	27.4	31.9	30.2	27.3	28.0	23.8	23.8
April.	Highest	84.4	75.3	75.0	74.9	83.3	74.5	78.4	79.7	78.8	80.6
	Lowest	13.1	16.5	15.0	13.8	16.8	20.2	13.6	16.0	17.0	7.8
	Mean highest	60.8	54.6	55.1	54.9	55.9	53.7	53.8	57.5	55.3	58.0
	Mean lowest	37.9	37.5	36.4	36.8	32.8	36.1	33.0	35.3	34.7	32.1
	Monthly mean	50.1	46.3	47.3	46.2	45.9	44.9	44.8	47.3	45.2	42.9
May.	Highest	86.5	73.5	81.0	79.2	85.8	78.5	77.8	77.7	79.3	80.6
	Lowest	32.5	32.1	32.5	30.4	33.1	35.1	32.5	33.1	37.0	31.4
	Mean highest	70.2	61.0	64.5	65.6	67.1	62.4	64.4	66.8	66.9	69.0
	Mean lowest	44.3	42.1	43.2	42.9	40.0	43.5	41.5	42.8	45.6	43.8
	Monthly mean	58.3	51.7	55.6	54.4	56.4	53.2	53.7	54.7	56.6	55.7
June.	Highest	93.2	88.5	80.0	84.9	85.8	81.1	90.8	87.6	83.6	86.9
	Lowest	42.1	38.2	40.0	37.2	38.1	41.3	41.0	40.1	44.5	41.4
	Mean highest	77.8	69.7	71.2	72.4	75.3	71.1	74.7	75.1	74.0	75.4
	Mean lowest	52.9	51.1	51.4	50.4	49.3	51.1	50.1	51.3	53.4	52.4
	Monthly mean	66.4	60.6	63.7	61.9	64.1	60.9	62.9	64.7	64.0	61.6
July.	Highest	95.2	89.6	87.0	91.7	96.3	89.5	97.0	92.6	91.3	96.1
	Lowest	40.0	42.8	45.0	43.8	41.2	47.5	41.5	44.2	48.2	45.0
	Mean highest	82.6	73.8	76.2	77.3	81.4	76.6	80.4	78.4	79.5	78.7
	Mean lowest	57.4	54.3	54.2	53.1	52.7	55.9	54.4	55.1	58.1	55.9
	Monthly mean	71.3	64.4	68.0	65.7	70.4	66.8	68.6	69.0	69.1	66.9
August.	Highest	93.3	87.0	84.0	88.8	89.8	87.9	93.1	88.6	88.0	96.6
	Lowest	49.2	42.3	43.0	40.5	44.3	46.3	44.0	42.2	45.1	46.0
	Mean highest	81.8	74.1	75.0	75.9	77.7	74.8	78.3	76.0	77.7	76.0
	Mean lowest	58.5	56.7	55.0	54.6	54.9	56.5	54.9	53.8	56.4	56.0
	Monthly mean	69.5	65.4	66.1	65.0	69.4	65.7	66.4	66.5	68.4	64.8
September.	Highest	91.1	85.3	81.0	84.5	87.8	83.9	89.7	87.6	87.9	88.6
	Lowest	38.2	37.9	38.0	33.3	34.6	40.1	36.0	36.1	30.4	36.4
	Mean highest	76.0	69.9	68.1	69.1	71.9	67.8	70.8	69.0	69.0	68.2
	Mean lowest	52.4	52.6	50.5	48.4	47 9	49.7	47.5	46.8	48.7	48.7
	Monthly mean	63.9	60.8	60.3	58.2	63.1	58.9	59 0	58.6	58.9	56.2
October.	Highest	81.5	72.4	73.0	78.0	79.0	71.1	76.6	77.7	75.5	79.2
	Lowest	31.1	31.6	32.0	28.7	26.5	26.4	25.9	18.0	20.3	24.4
	Mean highest	65.8	58.6	59.7	59.3	62.1	56.4	58.3	59.4	57.4	59.4
	Mean lowest	42.1	43.5	40.4	38.7	37.6	40.1	38.7	34.2	37.1	36.9
	Monthly mean	53.1	50.7	50.5	48.1	51.5	48.5	48.4	48.3	48.2	46.8
November.	Highest	73.0	65.1	63.0	65.1	69.8	62.0	71.6	64.7	67.7	70.8
	Lowest	17.5	10.0	20.0	3.2	14.8	14.5	6.3	1.8	3.5	−6.0
	Mean highest	46.1	41.9	44.1	39.4	46.0	42.0	40.3	42.1	39.9	38.5
	Mean lowest	28.4	29.8	30.0	25.5	25.5	29.0	25.4	22.9	25.2	26.0
	Monthly mean	37.1	35.7	37.5	32.8	37.1	35.6	33.9	33.9	33.0	33.7
December.	Highest	52.1	41.1	47.0	40.8	49.7	44.1	42.6	44.8	40.1	44.7
	Lowest	−5.0	−4.7	−5.0	−24.4	−0.6	0.2	−16.3	−15.3	−19.1	−32.1
	Mean highest	25.7	26.5	29.1	24.8	30.4	27.7	25.0	26.7	22.3	18.5
	Mean lowest	12.5	14.9	11.7	8.0	12.6	14.0	9.3	6.7	5.5	−1.4
	Monthly mean	21.2	21.4	21.9	17.5	23.4	21.5	17.4	16.8	13.6	10.6
	Annual Mean	47.4	43.8	45.4	42.7	46.7	43.7	42.7	43.3	42.1	40.0

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TABLE No. II.—Showing for each month the annual average of the highest, lowest, mean highest, mean lowest and mean temperature at the principal stations in Ontario derived for the five years 1882-6; also the average annual mean at each station for the period.

Temperature.	Windsor.	Goderich.	Simcoe.	Stratford.	Hamilton.	Toronto.	Barrie.	Peterboro'.	Cornwall.	Pembroke.
	°	°	°	°	°	°	°	°	°	°
January. Highest	49.1	45.3	47.2	45.6	50.5	44.0	44.0	43.0	46.2	40.8
Lowest	—8.9	—9.0	—14.5	—21.7	—12.8	—13.6	—29.1	—24.4	—25.7	—33.9
Mean highest	27.6	25.2	27.6	24.4	29.8	25.8	23.5	23.9	20.9	18.2
Mean lowest	11.6	13.0	11.2	7.4	9.2	10.8	2.8	5.1	1.6	—3.3
Monthly mean	20.0	18.8	19.9	16.1	20.4	18.8	14.5	14.8	10.9	7.1
February. Highest	54.6	47.1	49.7	44.8	49.6	41.2	44.0	43.9	46.8	43.7
Lowest	—8.0	—8.0	—9.7	—15.3	—7.8	—9.2	—15.8	—15.8	—18.1	—24.3
Mean highest	32.3	27.9	30.7	27.7	33.2	28.1	26.7	26.4	23.7	23.1
Mean lowest	13.4	13.2	12.1	8.6	11.7	12.1	6.1	5.6	4.8	0.9
Monthly mean	23.7	20.3	21.6	18.3	23.2	20.7	16.5	16.8	14.2	12.9
March. Highest	61.0	50.2	53.0	50.9	54.7	49.8	47.5	49.7	48.2	48.3
Lowest	1.8	—3.5	—5.3	—11.7	—3.7	—2.6	—13.9	—11.0	—15.4	—20.9
Mean highest	38.9	32.6	34.6	33.0	37.7	33.5	31.7	32.7	30.4	31.4
Mean lowest	19.8	18.7	17.4	13.5	17.0	18.2	12.1	13.0	11.8	8.5
Monthly mean	30.5	24.9	27.4	23.6	28.3	26.1	23.2	24.1	21.0	19.4
April. Highest	77.6	74.1	74.2	73.9	78.4	67.8	70.4	74.2	72.9	74.3
Lowest	19.2	18.0	17.6	12.8	16.9	19.4	12.8	14.4	16.9	10.5
Mean highest	55.8	49.1	50.5	50.1	52.5	48.6	47.9	50.9	50.1	49.4
Mean lowest	34.4	33.9	31.1	30.8	29.5	31.9	28.4	30.3	31.4	28.6
Monthly mean	45.4	40.7	42.7	40.6	42.3	40.4	38.9	41.6	39.7	38.3
May. Highest	82.8	76.3	74.3	73.2	82.4	74.4	78.1	78.1	80.7	83.8
Lowest	30.5	31.1	29.2	27.2	28.8	30.5	27.5	29.3	29.8	29.1
Mean highest	66.5	60.2	62.8	62.4	63.7	59.7	61.2	64.2	59.0	64.8
Mean lowest	42.9	43.1	41.9	41.0	38.6	41.8	39.8	41.4	43.2	40.9
Monthly mean	55.7	51.7	53.6	51.9	52.7	50.9	51.4	54.2	53.5	52.3
June. Highest	90.6	85.1	83.1	84.7	87.6	81.8	85.4	86.7	86.9	91.7
Lowest	42.0	41.2	39.2	37.7	37.9	40.4	40.3	41.9	41.3	40.9
Mean highest	77.7	72.4	74.4	72.2	75.9	72.0	73.5	76.4	75.3	76.7
Mean lowest	53.5	53.7	51.4	51.2	49.4	51.6	51.4	52.3	53.7	52.5
Monthly mean	67.2	63.0	64.6	63.2	64.2	62.0	62.8	65.3	64.3	63.6
July. Highest	92.1	87.3	86.3	87.4	92.5	87.4	88.5	89.8	88.4	92.2
Lowest	47.0	45.4	44.5	42.6	41.6	47.0	44.1	46.8	47.1	43.8
Mean highest	82.2	74.9	76.9	76.2	79.7	75.9	76.6	79.0	77.7	78.8
Mean lowest	59.0	57.0	55.4	54.2	54.2	56.2	55.1	55.5	57.8	55.3
Monthly mean	71.5	66.6	68.7	65.8	69.4	66.4	67.3	69.0	67.1	67.5
August. Highest	91.5	86.9	85.5	86.6	90.2	86.0	87.5	88.4	89.4	92.4
Lowest	45.8	45.4	41.9	39.9	43.2	45.3	42.7	40.5	41.8	41.7
Mean highest	79.8	74.0	75.4	74.3	77.7	74.1	74.8	76.4	77.3	77.6
Mean lowest	57.4	56.9	54.8	51.8	54.3	55.9	54.4	54.2	55.7	54.9
Monthly mean	68.6	65.4	66.0	63.2	68.1	65.2	65.3	66.6	66.1	65.5
September. Highest	89.6	84.0	82.1	83.8	88.3	83.6	85.3	86.3	84.2	86.5
Lowest	39.0	37.9	34.0	32.2	34.0	37.9	35.8	34.7	31.3	33.6
Mean highest	75.0	69.2	69.6	68.7	71.7	67.9	68.6	70.9	69.5	68.5
Mean lowest	52.1	52.0	49.2	47.9	47.2	49.3	48.6	47.3	47.8	46.2
Monthly mean	63.9	60.6	60.4	58.0	61.8	58.8	58.7	59.3	57.7	56.9
October. Highest	83.4	74.8	75.4	76.8	79.8	73.6	76.0	77.1	76.0	76.6
Lowest	27.0	28.3	25.8	22.7	22.6	25.8	23.4	20.9	21.8	23.6
Mean highest	62.8	57.3	58.7	56.9	60.7	55.7	56.3	57.3	56.0	56.5
Mean lowest	40.5	42.3	39.2	38.5	37.3	39.7	38.3	37.4	37.9	36.4
Monthly mean	52.3	49.6	49.7	47.0	50.6	48.1	47.9	47.8	46.6	45.5
November. Highest	67.7	62.6	64.1	64.4	67.9	60.4	63.2	61.0	61.8	60.0
Lowest	16.1	17.2	15.0	8.4	13.3	13.3	9.9	9.8	5.5	6.1
Mean highest	46.7	42.6	44.9	41.9	47.4	42.5	41.4	41.7	40.2	39.1
Mean lowest	30.3	31.8	29.7	27.2	27.3	29.6	27.4	26.3	26.0	25.6
Monthly mean	38.6	37.1	37.7	34.4	38.5	36.4	34.6	35.0	33.1	30.9
December. Highest	51.9	44.4	49.1	46.1	50.2	45.4	45.8	44.9	46.8	45.0
Lowest	—2.6	1.0	—4.6	—12.1	—1.8	—3.6	—12.7	—13.7	—16.6	—21.8
Mean highest	33.3	30.9	33.1	29.4	34.4	31.4	29.2	29.7	25.4	23.8
Mean lowest	18.4	20.6	17.8	14.9	17.5	18.5	13.9	11.7	9.9	7.1
Monthly mean	26.5	25.9	26.4	22.9	27.1	25.7	22.5	22.2	17.4	15.7
Annual Mean	47.0	43.7	44.9	42.1	45.6	43.3	42.0	42.2	41.0	39.6

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TABLE No. III.—Monthly summary of sunshine at the principal stations in Ontario in 1886, showing the number of hours the sun was above the horizon, the hours of registered sunshine, and the total for the year.

Months.	Hours of sun above horizon.	Windsor.	Woodstock.	Stratford.	Niagara, S.	Toronto.	Barrie.	Lindsay.	Kingston.	Cornwall.	Pembroke.
January	285.7	52.2	38.5	.....	34.0	56.7	32.3	71.9	65.0	72.7	85.3
February	291.4	93.9	88.9	63.5	94.4	101.0	73.3	111.1	87.6	94.9	78.3
March	369.9	131.7	112.8	108.3	111.6	141.6	108.5	130.8	129.1	110.5	129.8
April	406.4	209.0	187.4	193.9	168.3	180.2	167.5	214.9	201.8	212.8	212.6
May	461.1	264.6	246.2	250.5	229.2	261.9	246.9	263.2	232.6	226.2	165.1
June	465.7	278.3	248.1	216.3	253.8	270.8	228.4	253.2	216.3	218.1	127.5
July	470.9	248.2	260.0	271.3	236.3	277.9	246.3	269.4	228.8	262.9	216.7
August	434.5	214.6	220.6	225.8	227.1	237.6	201.4	234.8	238.3	262.9	204.3
September	376.3	192.8	190.9	163.5	195.3	187.7	157.8	193.8	186.9	176.8	177.5
October	340.2	189.1	143.1	130.5	134.4	160.0	106.5	147.0	133.0	123.6	154.8
November	286.9	97.2	85.2	63.4	87.6	101.2	52.1	79.4	71.4	71.1	86.2
December	274.3	81.1	66.8	66.8	68.4	57.8	30.8	75.4	76.3	73.7	89.8
Totals	4463.3	2052.7	1888.5	.....	1840.4	2034.4	1651.8	2044 9	1867.1	1906.2	1727.9

TABLE No. IV.—Monthly average of sunshine at the principal stations in Ontario for the five years 1882-6 showing the number of hours the sun was above the horizon and the hours of registered sunshine.

Months.	Hours of sun above horizon.	Windsor.	Woodstock.	Stratford.	Niagara, S.	Toronto.	Barrie.	Lindsay.	Kingston.	Cornwall.	Pembroke.
January	285.7	66.8	57.9	80.2	41.4	75.5	49.9	73.8	69.2	73.8	58.6
February	293.6	83.2	84.7	75.3	63.0	99.7	65.7	96.6	94.2	96.5	60.6
March	369.9	140.0	140.0	108.6	113.1	154.4	131.0	164.7	152.9	153.9	150.0
April	406.4	183.5	196.1	168.5	145.7	188.3	161.9	200.5	178.4	206.4	156.7
May	461.1	214.6	199.5	182.1	189.2	223.5	201.8	223.9	215.1	224.0	177.9
June	465.7	256.2	247.3	244.2	252.3	280.1	243.1	273.0	244.1	249.9	205.3
July	470.9	268.3	255.9	256.2	245.1	281.1	249.8	272.8	244.3	250.5	222.7
August	434.5	236.2	222.4	239.7	237.7	253.7	212.9	237.5	250.1	249.0	215 3
September	376.3	187.4	200.1	170.0	190.0	216.1	157.6	212.8	209.1	197.0	153.5
October	340.2	144.5	138.7	130.7	128.4	151.1	96.2	146.3	133.8	122.3	108.9
November	286.9	80.8	61.7	67.3	61.9	76.5	43.4	70.4	72.0	60.8	56.4
December	274.3	52.5	44.7	45.6	42.0	36.4	30.1	54.6	60.6	46.4	53.9
Totals	4465.5	1914.0	1849.0	1768.4	1709.8	2036.4	1643.4	2026.9	1923.8	1930.5	1619.8

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TABLE No. V.—Monthly summary of the average fall of Rain and Snow in the several districts of Ontario in 1886.

Months.	West and South-West.		North-West and North.		Centre.		East and North-East.	
	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.
	in.	in.	in.	in.	in.	in.	in.	in.
January	1.99	22.1	1.43	24.1	2.35	15.9	1.74	27.3
February	1.18	15.6	0.82	21.1	1.75	8.5	0.89	18.6
March	1.97	6.9	2.14	11.6	2.90	3.9	2.15	14.4
April	2.25	11.9	1.49	2.4	2.27	9.5	1.53	6.5
May	2.18	.....	1.26	S.	2.14	.....	1.67	S.
June	2.57	.....	2.35	.....	1.94	.....	3.10	.....
July	1.95	.....	1.51	.....	2.19	.....	3.43	.....
August	3.10	.....	3.30	.....	1.96	.....	2.67	.....
September	3.99	.....	4.41	.....	3.70	.....	3.33	.....
October	2.37	S.	2.98	S.	1.74	.....	1.91	S.
November	2.31	7.9	1.93	16.0	2.26	6.6	1.77	14.3
December	0.70	26.2	0.29	22.0	0.49	16.1	0.53	15.6
Totals	26.56	90.6	23.91	97.2	25.69	60.5	24.72	96.7

TABLE No. VI.—Monthly summary of the annual average fall of Rain and Snow in the several districts of Ontario for the five years 1882-6.

Months.	West and South-West.		North-West and North.		Centre.		East and North-East.	
	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.
	in.	in.	in.	in.	in.	in.	in.	in.
January	1.05	17.6	1.03	33.0	1.15	19.6	0.81	24.7
February	1.56	12.0	0.75	21.6	1.30	10.8	0.75	17.1
March	1.40	12.4	1.11	14.8	1.28	11.1	1.00	16.1
April	1.64	5.3	1.34	4.0	1.49	5.1	1.29	7.0
May	3.50	0.2	2.73	0.5	2.99	0.2	2.80	0.6
June	3.33	.....	3.12	.....	3.08	.....	3.01	.....
July	3.08	.....	2.42	.....	2.71	.....	3.26	.....
August	3.21	.....	2.77	.....	2.63	.....	2.65	.....
September	2.66	.....	3.45	.....	2.83	.....	2.97	.....
October	2.70	0.2	2.29	0.8	2.14	0.1	2.07	0.1
November	2.15	7.3	2.10	15.6	1.95	5.8	1.75	10.5
December	1.07	18.9	0.98	26.8	1.04	14.6	0.86	18.5
Totals	27.35	73.9	24.09	117.1	24.59	67.3	23.22	94.6

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TABLE No. VII.—Summary of the total fall of Rain and Snow, and of the number of days on which Rain and Snow fell in Ontario during the years 1885 and 1886 at Stations reporting for the whole year, and the averages for the Province.

Stations.	Observers.	Rain.				Snow.			
		1886.		1885.		1886.		1885.	
		Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.
Essex—									
Cottam	W. E. Wagstaff	27.69	94	32.23	105	65.3	41	56.8	45
Maidstone	T. F. Kane	22.78	78	34.51	99	.....	.....	49.8	25
Windsor	A. Sinclair, M.A.	23.15	83	26.50	93	64.3	39	36.8	40
Kent—									
Chatham	W. D. A. Ross	22.66	54	28.78	97	72.3	37	51.0	46
Blenheim	W. R. Fellows	29.42	78	35.24	87	85.5	43	52.3	37
Dealtown	S. J. Pardo	32.31	96	30.35	98	47.4	40	45.4	40
Ridgetown	Thos. Scane	25.00	98	31.27	95	82.9	45	60.3	56
Elgin—									
Aylmer	W. H. Draper	32.12	79	34.71	79	72.0	28	75.7	36
Cowal	S. Maccoll	26.34	84	26.01	61	74.1	35	60.4	34
Lyons	W. McCredie	34.21	79	31.58	89	65.8	41	54.1	36
Port Stanley	M. Payne	28.48	121	28.64	114	94.0	76	67.9	81
Norfolk—									
Port Dover	H. Morgan	30.08	112	23.52	124	88.3	74	66.7	77
Simcoe	D. S. Paterson, B.A	24.47	71	24.15	74	43.5	31	48.1	47
Lambton—									
Birnam	J. S. Mellor	24.62	78	25.21	88	126.7	69	109.5	66
Oil Springs	A. Smyth	23.55	81	27.02	73	70.6	35	65.1	32
Sarnia	Wm. Mowbray	22.31	66	23.20	68	47.5	24	69.0	35
Thedford	Martin Wattson	24.49	94	23.00	82	90.0	47	70.0	60
Watford	D. Ross	26.64	59	26.73	50	.....	.....	.....	.....
Huron—									
Goderich	H. J. Strang, B.A	26.66	106	25.50	115	97.6	75	82.7	91
Goderich L. House	R. Campbell	20.60	63	23.77	110	124.7	64	131.2	82
Zurich	G. Hess	23.88	89	25.34	81	118.8	47	102.3	53
Sunshine	G. Hood	28.96	88	31.64	88	119.6	65	86.3	51
Bruce—									
Lucknow	M. McDonald	26.98	106	28.05	101	129.4	71	141.1	112
Point Clark	J. Ray	25.69	54	22.64	47	114.0	41	95.0	92
Saugeen	Mrs. J. R. Stewart	24.12	102	23.12	95	123.5	76	143.8	95
Grey—									
Bognor	C. H. Henning	27.49	73	31.06	62	88.0	43	146.5	45
Durham	James Gunn, M.D.	25.86	83	29.77	103	150.0	70	208.0	86
Presque Isle	J. McKenzie	26.70	88	24.89	75	101.0	45	156.6	77
Simcoe—									
Barrie	H. B. Spotton, M.A.	20.63	72	20.47	66	78.1	57	94.1	72
Coldwater	J. N. Lazenby	23.76	62	27.15	61	121.8	38	157.2	45
Orillia	H. A. Fitton	26.44	106	19.90	89	99.9	68	132.5	98
Middlesex—									
Ailsa Craig	J. Rennie	20.77	43	27.25	59	93.0	26	68.0	31
Granton	Jas. Grant	24.87	92	30.45	86	90.6	66	90.9	79
London	E. B. Reed	26.54	71	27.96	80	133.5	50	126.6	50
Wilton Grove	H. Anderson	27.57	74	28.62	59	59.0	41	58.0	31
Oxford—									
Otterville	Thos. Wright	29.52	76	29.73	69	76.0	32	64.4	36
Princeton	D. Beamer	29.57	86	32.88	90	74.5	44	64.5	44
Woodstock	Prof. Wolverton, M.A	23.90	93	31.61	82	67.2	63	62.7	64
Brant—									
Paris	John Kay	28.92	94	30.99	79	51.9	33	52.2	35
St. George	E. E. Kitchen, M.D.	31.70	94	32.92	96	79.8	54	78.2	47
Perth—									
Listowel	A. Kay	29.07	93	26.81	88	113.5	58	130.0	79
Stratford	Wm. McBride, M.A.	28.34	81	30.02	87	108.1	58	111.8	76
Wellington—									
Fergus	A. D. Ferrier	32.38	115	31.56	104	108.7	67	93.9	80
Guelph	C. A. Zavitz	23.31	76	15.70	80	71.5	57	34.9	39

TABLE No. VII.—THE WEATHER.—*Continued.*

Stations.	Observers.	Rain.				Snow.			
		1886.		1885.		1886.		1885.	
		Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.
Waterloo—									
Conestogo	G. A. McIntyre	31.45	90	27.43	84	74.2	65	65.8	81
Dufferin—									
Orangeville	N. Gordon	28.89	88	28.79	86	59.8	42	77.4	35
Wentworth—									
Copetown	J. Ireland	28.25	90	28.78	90	65.4	36	70.3	61
Hamilton	T. S. Campbell, M.A	23.54	58	24.85	76	44.6	29	67.1	40
Stoney Creek	C. T. Van Wagner	35.57	92	32.67	97	41.0	34	52.0	28
Halton—									
Georgetown	Jos. Barber, jr	27.06	112	28.81	121	81.5	88	80.6	92
York—									
Aurora	W. Amos	23.01	92	20.93	71	55.6	38	63.5	48
Georgina	Capt. Sibbald, R.N.	19.21	115	18.87	101	105.4	67	92.4	82
Scarboro'	R. Martin	27.12	103	25.79	99	63.4	52	49.0	68
Toronto	Observatory	27.73	112	26.35	103	73.5	66	65.6	73
Ontario—									
Oshawa	Rev. J. Middleton	26.95	77	23.53	68	64.6	30	55.0	30
Len'x. & Addington									
Denbigh	J. Lane	27.44	59	24.89	62	109.5	35	134.8	36
Frontenac—									
Harrowsmith	J. Donnelly	28.59	62	27.43	79	71.0	40	78.1	44
Kingston	A. P. Knight, M.A.	29.92	95	30.80	117	118.1	81	112.4	83
Leeds & Grenville.									
Prescott	C. Chapman	27.34	83	23.79	86	146.5	62	170.8	62
Stormont—									
Cornwall	W. D. Johnson, M.A	22.58	74	25.36	107	93.3	44	103.7	32
Carleton—									
Ottawa	A. McGill, B.A.	25.29	103	20.87	82	115.3	62	137.4	56
Renfrew—									
Clontarf	A. Schultz	24.07	102	17.61	72	115.7	66	141.6	61
Pembroke	L. Lapp	22.93	57	27.39	61	82.0	32	99.0	47
Renfrew	W. E. Smallfield	18.95	75	16.56	77	73.5	35	114.8	49
Rockliffe	W. H. McIntyre	25.68	74	18.32	88	87.6	71	106.8	83
Lanark—									
Oliver's Ferry	W. J. McLean	24.46	64	29.71	53	53.8	21	100.3	33
Victoria—									
Bobcaygeon	J. Stewart	25.47	92	24.73	86	74.4	44	76.9	56
Lindsay	Thos. Beall	23.36	105	19.00	89	102.8	56	104.0	69
Peterborough—									
Burleigh	Wm. McIlmoyle	14.06	46	10.83	44	93.5	34	78.7	43
Ennismore	Thos. Tellford	28.08	91	26.89	92	77.7	46	86.4	59
Norwood	Rev. J. Carmichael	27.89	71	24.03	77	132.2	34	53.2	37
Peterborough	J. H. Long	24.05	92	23.66	105	84.3	48	78.5	57
Haliburton—									
Haliburton	C. R. Stewart	22.60	93	20.39	83	73.6	62	100.9	76
Hastings—									
Deseronto	J. Russell	18.45	82	26.71	104	79.4	45	86.4	56
L'Amable	B. Spurr	24.85	79	23.00	82	97.2	48	111.0	57
Shannonville	J. M. Kemp	18.73	48	25.56	69	86.0	27	94.4	40
Muskoka—									
Bala	E. B. Sutton	31.86	126	23.74	110	120.3	79	128.1	94
Beatrice	J. Hollingworth	32.52	102	27.86	82	114.9	47	162.5	75
Charlinch	C. J. Tisdall	29.73	102	28.33	108	140.4	78	173.6	104
Gravenhurst	T. M. Robinson	24.61	91	23.24	89	106.0	55	128.6	81
Parry Sound—									
Parry Sound	Rev. R. Mosley	28.27	97	27.33	96	108.7	69	130.7	96
Sprucedale	A. McKenzie	23.67	62	22.09	56	99.6	26	131.4	49
Algoma—									
Port Arthur	W. P. Cooke	18.18	83	14.93	56	51.0	38	39.1	27
Averages for the Province		25.99	84.6	26.08	84.8	89.2	49.9	92.1	58.2

FALL WHEAT.

TABLE No. VIII.—Showing by County Municipalities and groups of Counties the area and produce of Fall Wheat in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	32,138	712,178	22.2	28,087	684,761	24.4	32,915	667,523	20.3
Kent	63,567	1,390,846	21.9	59,717	1,530,547	25.6	61,815	1,294,215	20.9
Elgin	42,405	975,315	23.0	38,999	885,667	22.7	45,241	941,894	20.8
Norfolk	34,797	542,485	15.6	32,549	764,902	23.5	33,447	641,428	19.2
Haldimand	34,612	534,409	15.4	31,856	795,126	25.0	33,186	589,895	17.8
Welland	22,761	445,205	19.6	21,806	458,798	21.0	23,150	396,104	17.1
Totals	230,280	4,600,438	20.0	213,014	5,119,801	24.0	229,754	4,531,059	19.7
Lambton	32,259	647,116	20.1	28,743	810,553	28.2	33,833	676,114	20.0
Huron	69,447	1,590,336	22.9	59,193	1,527,179	25.8	72,393	1,578,364	21.8
Bruce	46,699	1,025,510	22.0	45,269	1,014,026	22.4	53,213	1,117,278	21.0
Totals	148,405	3,262,962	22.0	133,205	3,351,758	25.2	159,439	3,371,756	21.1
Grey	22,703	451,790	19.9	22,783	445,635	19.6	29,922	632,720	21.1
Simcoe	43,541	741,939	17.0	54,602	1,378,700	25.2	55,627	1,244,448	22.4
Totals	66,244	1,193,729	18.0	77,385	1,824,335	23.6	85,549	1,877,168	21.9
Middlesex	64,948	1,443,145	22.2	60,401	1,420,028	23.5	76,639	1,627,948	21.2
Oxford	35,179	761,625	21.7	33,319	814,316	24.4	39,575	821,553	20.8
Brant	30,175	502,112	16.6	30,275	639,711	21.1	32,307	646,789	20.0
Perth	47,772	1,076,781	22.5	40,568	1,115,620	27.5	47,291	1,061,998	22.5
Wellington	25,401	557,552	22.0	26,558	630,487	23.7	29,998	640,573	21.4
Waterloo	40,011	808,222	20.2	38,897	976,704	25.1	41,135	923,799	22.5
Dufferin	9,998	206,159	20.6	12,945	282,072	21.8	12,620	262,365	20.8
Totals	253,484	5,355,596	21.1	242,963	5,878,938	24.2	279,565	5,985,025	21.4
Lincoln	23,100	432,663	18.7	21,009	543,082	25.8	22,754	456,677	20.1
Wentworth	32,413	507,912	15.7	31,409	798,417	25.4	32,838	682,593	20.8
Halton	20,418	312,600	15.3	23,025	602,795	26.2	23,546	475,707	20.2
Peel	28,791	531,770	18.5	29,600	908,720	30.7	29,040	680,916	23.4
York	29,761	608,315	20.4	39,578	1,065,440	26.9	41,247	953,474	23.1
Ontario	4,994	106,971	21.4	9,921	249,017	25.1	11,995	273,137	22.8
Durham	2,959	68,678	23.2	2,640	61,670	23.4	3,363	72,863	21.7
Northumberland	9,172	231,318	25.2	9,699	235,977	24.3	9,813	225,352	23.0
Prince Edward	1,211	26,121	21.6	1,903	40,344	21.2	2,552	40,677	15.9
Totals	152,819	2,826,348	18.5	168,784	4,505,462	26.7	177,148	3,861,396	21.8
Lennox and Addington	1,602	32,296	20.2	2,293	38,981	17.0	2,219	40,855	18.4
Frontenac	903	17,609	19.5	2,292	48,430	21.1	2,310	44,839	19.4
Leeds and Grenville	3,479	72,468	20.8	5,070	102,820	20.3	6,307	118,895	18.9
Dundas	304	6,688	22.0	718	8,408	11.7	1,657	29,573	17.8
Stormont	312	6,240	20.0	492	7,710	15.7	932	16,947	18.2
Glengarry	215	3,296	15.3	420	8,274	19.7	861	13,977	16.2
Prescott	4	80	20.0	52	936	18.0	102	1,236	12.1
Russell	13	312	24.0	78	897	11.5	271	4,794	17.7
Carleton	135	2,511	18.6	718	10,318	14.4	2,098	29,876	14.2
Renfrew	275	4,813	17.5	269	4,412	16.4	1,405	24,550	17.5
Lanark	2,003	39,760	19.9	2,962	63,535	21.4	3,695	72,557	19.6
Totals	9,245	186,073	20.1	15,364	294,721	19.2	21,857	398,099	18.2
Victoria	9,563	221,001	23.1	7,708	184,530	23.9	9,879	202,474	20.5
Peterborough	9,604	249,704	26.0	9,048	179,241	19.8	10,342	229,629	22.2
Haliburton	74	1,140	15.4	34	381	11.2	82	1,228	15.0
Hastings	6,589	172,632	26.2	7,307	132,476	18.1	8,389	169,549	20.2
Totals	25,830	644,477	25.0	24,097	496,628	20.6	28,692	602,880	21.0
Muskoka	58	870	15.0	79	1,738	22.0	55	960	17.5
Parry Sound	3	60	20.0	80	1,600	20.0	44	813	18.5
Algoma	34	589	17.3	165	3,300	20.0	299	6,687	22.4
Totals	95	1,519	16.0	324	6,638	20.5	398	8,460	21.3
The Province	886,402	18,071,142	20.4	875,136	21,478,281	24.5	982,402	20,635,843	21.0

SPRING WHEAT.

TABLE No. IX.—Showing by County Municipalities and groups of Counties the area and produce of Spring Wheat in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	1,744	25,288	14.5	2,707	39,766	14.7	1,888	29,670	15.7
Kent	3,456	61,932	17.9	5,634	87,665	15.6	2,745	46,113	16.8
Elgin	3,356	48,091	14.3	5,578	78,427	14.1	2,348	36,830	15.7
Norfolk	1,056	12,883	12.2	2,037	31,064	15.2	1,003	15,272	15.2
Haldimand	2,891	35,473	12.3	5,412	73,756	13.6	3,071	45,506	14.8
Welland	1,528	20,445	13.4	4,256	48,816	11.5	2,078	30,360	14.6
Totals	14,031	204,112	14.5	25,624	359,494	14.0	13,133	203,751	15.5
Lambton	9,234	128,076	13.9	15,473	226,215	14.6	8,125	126,179	15.5
Huron	21,732	264,913	12.2	41,465	341,257	8.2	25,058	343,866	13.7
Bruce	15,873	247,301	15.6	22,048	248,040	11.2	15,802	227,956	14.4
Totals	46,839	640,290	13.7	78,986	815,512	10.3	48,985	698,001	14.2
Grey	38,329	556,920	14.5	51,584	450,328	8.7	50,659	735,250	14.5
Simcoe	36,088	693,972	19.2	44,360	420,089	9.5	37,033	595,468	16.1
Totals	74,417	1,250,892	16.8	95,944	870,417	9.1	87,692	1,330,718	15.2
Middlesex	18,763	252,925	13.5	35,390	440,606	12.4	15,894	250,745	15.8
Oxford	13,779	189,323	13.7	22,711	264,583	11.6	13,135	222,321	16.9
Brant	1,495	17,761	11.9	3,440	32,818	9.5	1,735	23,775	13.7
Perth	13,084	172,709	13.2	27,732	190,796	6.9	17,758	268,987	15.1
Wellington	19,521	286,959	14.7	31,460	253,568	8.1	25,690	381,965	14.9
Waterloo	5,529	74,089	13.4	11,941	103,767	8.7	7,394	111,477	15.1
Dufferin	17,989	293,401	16.3	22,272	205,125	9.2	21,356	307,426	14.4
Totals	90,160	1,287,167	14.3	154,946	1,491,263	9.6	102,962	1,566,696	15.2
Lincoln	2,183	27,768	12.7	4,542	56,957	12.5	2,727	42,197	15.5
Wentworth	2,853	37,916	13.3	4,775	64,176	13.4	3,103	49,323	15.9
Halton	3,224	44,491	13.8	5,770	56,546	9.8	3,876	59,895	15.5
Peel	10,779	160,823	14.9	14,464	184,271	12.7	14,066	241,196	17.1
York	24,754	461,662	18.7	32,330	378,261	11.7	28,310	510,555	18.0
Ontario	46,157	977,144	21.2	53,583	579,768	10.8	49,850	898,292	18.0
Durham	31,535	540,510	17.1	48,808	511,020	10.5	43,537	749,442	17.2
Northumberland	25,154	378,316	15.0	36,363	353,448	9.7	32,158	480,737	14.9
Prince Edward	5,877	87,332	14.9	11,729	113,419	9.7	7,826	108,746	13.9
Totals	152,516	2,715,962	17.8	212,364	2,297,866	10.8	185,453	3,140,380	16.9
Lennox and Addington	5,930	90,492	15.3	8,774	106,604	12.1	7,257	113,224	15.6
Frontenac	8,237	129,403	15.7	10,984	164,760	15.0	9,079	148,553	16.4
Leeds and Grenville	14,663	256,163	17.5	14,329	281,278	19.6	14,083	249,065	17.7
Dundas	5,940	129,492	21.8	5,897	123,188	20.9	4,746	95,724	20.2
Stormont	5,372	99,919	18.6	4,530	93,998	20.7	4,348	82,757	19.0
Glengarry	8,932	166,760	18.7	8,749	164,481	18.8	7,874	134,402	17.1
Prescott	9,125	199,655	21.9	7,970	114,529	14.4	8,099	134,706	16.6
Russell	4,480	86,822	19.4	4,240	78,143	18.4	4,446	78,135	17.6
Carleton	21,140	356,420	16.9	22,981	403,546	17.6	23,055	394,751	17.1
Renfrew	24,695	411,666	16.7	26,238	431,353	16.4	25,294	445,406	17.6
Lanark	14,373	225,944	15.7	16,548	261,127	15.8	14,424	240,415	16.7
Totals	122,887	2,152,736	17.5	131,240	2,223,007	16.9	122,705	2,117,138	17.3
Victoria	27,708	463,278	16.7	36,328	353,108	9.7	36,278	564,521	15.6
Peterborough	25,185	425,627	16.9	31,478	256,231	8.1	27,028	391,914	14.5
Haliburton	1,062	17,459	16.4	1,297	15,784	12.2	1,313	16,028	12.2
Hastings	14,734	236,481	16.1	22,375	310,341	13.9	18,249	306,081	16.8
Totals	68,689	1,142,845	16.6	91,478	935,464	10.2	82,868	1,278,544	15.4
Muskoka	1,191	18,079	15.2	1,651	22,404	13.6	1,611	25,061	15.6
Parry Sound	1,202	18,883	15.7	1,803	33,049	18.3	1,858	31,621	17.0
Algoma	5,533	87,587	15.8	5,427	81,405	15.0	7,093	138,121	19.5
Totals	7,926	124,549	15.7	8,881	136,858	15.4	10,562	194,803	18.4
The Province	577,465	9,518,553	16.5	799,463	9,129,881	11.4	654,360	10,530,031	16.1

BARLEY.

TABLE No. X.—Showing by County Municipalities and groups of Counties the area and produce of Barley in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	2,894	80,540	27.8	2,257	62,654	27.8	2,238	60,820	27.2
Kent	4,954	141,883	28.6	3,978	115,163	28.9	5,641	152,252	27.0
Elgin	4,047	119,467	29.5	3,543	104,235	29.4	4,420	123,066	27.8
Norfolk	5,806	136,209	23.5	4,215	122,614	29.1	5,985	164,100	27.4
Haldimand	14,347	345,045	24.1	12,136	349,395	28.8	15,136	346,290	22.9
Welland	3,503	74,894	21.4	4,281	107,796	25.2	4,199	101,511	24.2
Totals	35,551	898,038	25.3	30,410	861,857	28.3	37,619	948,039	25.2
Lambton	12,205	363,831	29.8	11,977	365,179	30.5	14,496	374,806	25.9
Huron	21,720	613,807	28.3	17,550	494,559	28.2	25,235	720,737	28.6
Bruce	19,757	524,548	26.6	14,623	410,029	28.0	18,271	502,790	27.5
Totals	53,682	1,502,186	28.0	44,150	1,269,767	28.8	58,002	1,598,333	27.6
Grey	25,271	616,360	24.4	21,625	526,353	24.3	24,329	628,636	25.8
Simcoe	28,741	807,047	28.1	19,961	528,967	26.5	26,954	743,491	27.6
Totals	54,012	1,423,407	26.4	41,586	1,055,320	25.4	51,283	1,372,127	26.8
Middlesex	11,749	342,013	29.1	9,147	252,823	27.6	14,897	397,533	26.7
Oxford	13,604	421,180	31.0	11,401	345,678	30.3	16,348	506,261	31.0
Brant	18,206	469,533	25.8	14,413	463,090	32.1	15,395	440,195	28.6
Perth	13,243	397,687	30.0	12,087	347,501	28.7	18,036	533,531	29.6
Wellington	33,145	931,706	28.1	27,228	765,651	28.1	33,025	942,916	28.6
Waterloo	14,734	418,446	28.4	11,652	370,417	31.8	14,971	463,659	31.0
Dufferin	13,039	348,011	26.7	9,578	273,643	28.6	10,626	275,270	25.9
Totals	117,720	3,328,576	28.3	95,506	2,818,803	29.5	123,298	3,559,365	28.9
Lincoln	3,152	70,006	22.2	3,216	91,302	28.4	4,252	112,403	26.4
Wentworth	12,883	314,088	24.4	9,988	320,115	32.0	11,552	336,158	29.1
Halton	13,944	330,333	23.7	8,971	280,523	31.3	12,203	343,980	28.2
Peel	33,636	852,000	25.3	27,166	910,061	33.5	30,931	893,303	28.9
York	57,859	1,720,727	29.7	45,942	1,416,392	30.8	52,069	1,541,774	29.6
Ontario	37,882	1,194,041	31.5	29,204	801,066	27.4	34,971	1,016,786	29.1
Durham	52,320	1,555,474	29.7	37,843	1,061,875	28.1	42,920	1,239,061	28.9
Northumberland	48,319	1,101,190	22.8	38,344	1,043,340	27.2	43,764	1,082,393	24.7
Prince Edward	34,748	684,883	19.7	36,470	796,140	21.8	40,586	845,896	20.8
Totals	294,743	7,822,742	26.5	237,144	6,720,814	28.3	273,248	7,411,754	27.1
Lennox and Addington	37,846	870,458	23.0	35,852	854,353	23.8	42,376	981,639	23.2
Frontenac	13,422	323,202	24.1	16,263	425,277	26.2	19,128	482,334	25.2
Leeds and Grenville	10,282	269,697	26.2	8,155	220,185	27.0	11,407	295,498	25.9
Dundas	5,117	152,487	29.8	5,742	165,886	28.9	7,607	236,110	31.0
Stormont	1,693	46,727	27.6	1,994	55,832	28.0	2,510	71,961	28.7
Glengarry	2,047	48,780	23.8	1,380	34,500	25.0	2,044	48,508	23.7
Prescott	2,702	90,517	33.5	2,024	41,998	20.8	2,093	54,201	25.9
Russell	1,345	32,509	24.2	1,301	31,224	24.0	1,248	31,587	25.3
Carleton	9,343	260,857	27.9	5,758	177,692	30.9	7,195	208,545	29.0
Renfrew	1,357	38,512	28.4	1,148	30,491	26.6	1,106	30,751	27.8
Lanark	2,763	74,905	27.1	2,554	79,174	31.0	2,376	68,860	29.0
Totals	87,917	2,208,651	25.1	82,171	2,116,612	25.8	99,090	2,509,994	25.3
Victoria	34,124	857,195	25.1	24,866	632,094	25.4	27,936	717,323	25.7
Peterborough	15,498	391,789	25.3	11,567	275,757	23.8	13,511	356,057	26.4
Haliburton	245	6,034	24.6	338	8,450	25.0	281	7,113	25.5
Hastings	39,881	1,018,162	25.5	28,030	723,735	25.8	41,823	1,046,996	25.0
Totals	89,748	2,273,180	25.3	64,801	1,640,036	25.3	83,551	2,127,489	25.5
Muskoka	668	13,834	20.7	655	13,428	20.5	552	12,028	21.8
Parry Sound	1,026	25,311	24.7	780	18,525	23.7	746	18,310	24.5
Algoma	711	16,353	23.0	670	18,425	27.5	590	15,291	25.9
Totals	2,405	55,498	23.1	2,105	50,378	23.5	1,888	45,629	24.2
The Province	735,778	19,512,278	26.5	597,873	16,533,587	27.7	727,979	19,572,730	26.9

OATS.

TABLE No. XI.—Showing by County Municipalities and groups of Counties the area and produce of Oats in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	28,852	1,253,908	43.5	28,141	1,118,042	39.7	26,592	1,050,185	39.5
Kent	32,616	1,422,384	43.6	32,923	1,359,391	41.3	31,148	1,306,793	42.0
Elgin	30,410	1,288,168	42.4	31,546	1,206,319	38.3	30,926	1,236,889	40.0
Norfolk	24,213	790,797	32.7	26,465	992,438	37.5	25,635	928,832	36.2
Haldimand	21,241	711,998	33.5	21,723	802,230	36.9	20,864	734,974	35.2
Welland	17,157	587,113	34.2	17,219	559,962	32.5	18,067	603,003	33.4
Totals	154,489	6,054,368	39.2	158,017	6,038,382	38.2	153,232	5,860,676	38.2
Lambton	37,110	1,443,950	38.9	38,183	1,473,864	38.6	36,213	1,393,646	38.5
Huron	73,289	2,708,029	37.0	69,877	2,632,965	37.7	69,295	2,660,059	38.4
Bruce	59,023	2,026,260	34.3	55,249	2,042,003	37.0	53,291	1,892,825	35.5
Totals	169,422	6,178,239	36.5	163,309	6,148,832	37.7	158,799	5,946,530	37.4
Grey	87,139	2,872,101	33.0	76,182	2,501,817	32.8	76,926	2,630,624	34.2
Simcoe	68,014	2,584,532	38.0	58,433	1,937,054	33.1	57,150	2,075,361	36.3
Totals	155,153	5,456,633	35.2	134,615	4,438,871	33.0	134,076	4,705,985	35.1
Middlesex	68,745	2,700,304	39.3	68,122	2,570,924	37.7	66,268	2,667,420	40.3
Oxford	51,197	2,066,823	40.4	49,717	1,915,099	38.5	48,478	1,996,553	41.2
Brant	16,946	583,451	34.4	18,596	677,638	36.4	17,448	691,088	39.6
Perth	54,171	2,235,095	41.3	49,885	1,961,478	39.3	50,434	2,111,466	41.9
Wellington	69,930	2,587,410	37.0	65,129	2,420,845	37.2	61,680	2,352,136	38.1
Waterloo	34,184	1,198,833	35.1	33,708	1,320,005	39.2	32,243	1,278,225	39.6
Dufferin	29,152	1,065,214	36.5	26,109	988,487	37.9	25,454	901,971	35.4
Totals	324,325	12,437,130	38.3	311,266	11,854,476	38.1	302,005	11,998,859	39.7
Lincoln	16,277	509,796	31.3	17,573	658,988	37.5	17,216	622,218	36.1
Wentworth	27,797	978,176	35.2	26,388	1,061,061	40.2	27,435	1,104,623	40.3
Halton	18,144	583,692	32.2	17,520	689,587	39.4	17,472	660,501	37.8
Peel	27,143	922,862	34.0	27,944	1,116,363	40.0	26,082	1,023,144	39.2
York	62,423	2,554,349	40.9	59,890	2,286,001	38.2	57,588	2,418,013	42.0
Ontario	49,123	2,079,377	42.3	46,895	1,642,732	35.0	44,636	1,754,215	39.3
Durham	34,202	1,330,800	38.9	31,957	1,103,475	34.5	31,950	1,233,524	38.6
Northumberland	31,324	972,297	31.0	29,614	915,369	30.9	27,613	921,168	33.4
Prince Edward	15,482	468,950	30.3	13,487	365,228	27.1	13,483	394,590	29.3
Totals	281,915	10,400,299	36.9	271,268	9,838,804	36.3	263,475	10,131,996	38.5
Lennox and Addington	23,922	713,593	29.8	23,121	741,722	32.1	20,919	664,584	31.8
Frontenac	27,953	824,614	29.5	24,699	790,368	32.0	25,522	822,214	32.2
Leeds & Grenville	67,448	2,241,972	33.2	62,069	2,165,587	34.9	60,916	2,097,824	34.4
Dundas	31,351	1,254,040	40.0	29,350	1,229,472	41.9	27,858	1,085,386	39.0
Stormont	25,398	990,522	39.0	24,749	822,904	33.2	24,324	890,115	36.6
Glengarry	30,930	984,502	31.8	30,725	1,190,594	38.8	29,499	1,039,839	35.2
Prescott	27,039	1,015,585	37.6	26,973	805,684	29.9	24,864	793,137	31.9
Russell	20,091	680,683	33.9	19,098	564,728	29.6	17,523	599,395	34.2
Carleton	63,448	2,066,501	32.6	57,141	1,978,793	34.6	55,129	2,093,482	38.0
Renfrew	42,741	1,466,016	34.3	39,603	1,285,513	32.5	36,987	1,317,210	35.6
Lanark	40,430	1,280,418	31.7	37,728	1,290,675	34.2	33,438	1,195,680	35.8
Totals	400,751	13,518,446	33.7	375,256	12,866,040	34.3	356,979	12,598,816	35.3
Victoria	38,204	1,381,839	36.2	37,828	1,152,619	30.5	34,609	1,201,996	34.7
Peterborough	30,425	1,019,238	33.5	30,616	965,935	31.6	27,356	947,909	34.7
Halliburton	4,980	174,300	35.0	4,286	121,422	28.3	4,502	131,452	29.2
Hastings	45,107	1,494,846	33.1	40,530	1,310,335	32.3	40,227	1,304,632	32.4
Totals	118,716	4,070,223	34.3	113,260	3,550,311	31.3	106,694	3,585,989	33.6
Muskoka	9,225	277,765	30.1	7,948	209,986	26.4	7,732	240,099	31.1
Parry Sound	3,756	130,070	34.6	5,262	182,434	34.7	4,256	141,521	33.3
Algoma	4,149	142,435	34.3	3,544	101,606	28.7	3,406	122,922	36.1
Totals	17,130	550,270	32.1	16,754	494,026	29.5	15,394	504,542	32.8
The Province	1,621,901	58,665,608	36.2	1,543,745	55,229,742	35.8	1,490,654	55,333,393	37.1

RYE.

TABLE No. XII.—Showing by County Municipalities and groups of Counties the area and produce of Rye in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	664	13,751	20.7	1,367	29,049	21.2	805	16,717	20.8
Kent	541	9,976	18.4	545	16,350	30.0	497	11,396	22.9
Elgin	958	16,669	17.4	1,226	16,710	13.6	1,176	20,129	17.1
Norfolk	5,967	82,703	13.9	6,416	97,523	15.2	7,038	106,954	15.2
Haldimand	273	4,300	15.8	342	5,558	16.2	1,099	18,872	17.2
Welland	502	10,442	20.8	1,084	20,235	18.7	704	12,557	17.8
Totals	8,905	137,841	15.5	10,980	185,425	16.9	11,319	186,625	16.5
Lambton	46	782	17.0	248	4,299	17.3	220	3,503	15.9
Huron	238	7,140	30.0	135	2,025	15.0	288	5,254	18.2
Bruce	300	4,500	15.0	71	1,775	25.0	387	6,159	15.9
Totals	584	12,422	21.3	454	8,099	17.8	895	14,916	16.7
Grey	140	2,800	20.0	312	7,020	22.5	580	9,944	17.1
Simcoe	1,085	16,926	15.6	1,167	23,340	20.0	2,387	46,034	19.3
Totals	1,225	19,726	16.1	1,479	30,360	20.5	2,967	55,978	18.9
Middlesex	178	3,427	19.3	349	6,980	20.0	423	7,475	17.7
Oxford	600	12,198	20.3	705	10,575	15.0	1,156	17,154	14.8
Brant	425	6,460	15.2	725	10,331	14.2	818	12,063	14.7
Perth	123	2,460	20.0	187	3,179	17.0	226	3,676	16.3
Wellington	348	6,473	18.6	563	8,445	15.0	845	15,236	18.0
Waterloo	322	5,690	17.7	455	7,887	17.3	592	10,522	17.8
Dufferin	586	14,650	25.0	451	4,510	10.0	940	17,100	18.2
Totals	2,582	51,358	19.9	3,435	51,907	15.1	5,000	83,226	16.6
Lincoln	293	5,066	17.3	219	4,034	18.4	589	9,304	15.8
Wentworth	244	3,782	15.5	214	3,700	17.3	977	17,508	17.9
Halton	212	3,286	15.5	46	805	17.5	553	9,399	17.0
Peel	423	8,460	20.0	611	10,692	17.5	1,774	36,124	20.4
York	615	9,489	15.4	692	11,072	16.0	2,136	33,364	15.6
Ontario	1,494	21,215	14.2	1,562	23,992	15.4	3,442	61,450	17.9
Durham	3,727	56,762	15.2	2,517	31,790	12.6	5,679	87,968	15.5
Northumberland	6,986	101,157	14.5	8,018	115,700	14.4	12,124	172,356	14.2
Prince Edward	7,880	107,877	13.7	7,186	117,994	16.4	9,782	137,264	14.0
Totals	21,874	317,094	14.5	21,065	319,779	15.2	37,056	564,737	15.2
Lennox and Addington	3,610	57,255	15.9	3,810	53,035	13.9	6,160	93,735	15.2
Frontenac	726	11,333	15.6	2,406	42,514	17.7	4,552	77,907	17.1
Leeds and Grenville	2,298	36,768	16.0	3,923	64,180	16.4	8,906	160,431	18.0
Dundas	945	20,223	21.4	1,468	28,626	19.5	1,768	43,230	24.5
Stormont	207	5,036	24.3	371	3,710	10.0	621	13,106	21.1
Glengarry	22	330	15.0	2	40	20.0	79	1,388	17.6
Prescott	270	5,281	19.6	241	4,820	20.0	362	6,725	18.6
Russell				91	1,820	20.0	317	6,140	19.4
Carleton	3,040	57,456	18.9	4,472	75,353	16.8	7,721	139,478	18.1
Renfrew	4,915	104,198	21.2	6,093	117,900	19.3	7,481	154,660	20.7
Lanark	2,140	35,524	16.6	2,643	54,631	20.7	6,302	124,156	19.7
Totals	18,173	333,404	18.3	25,520	446,629	17.5	44,269	820,956	18.5
Victoria	773	10,822	14.0	768	12,419	16.2	1,328	21,466	16.2
Peterborough	3,059	50,994	16.7	2,474	40,005	16.2	3,708	61,261	16.5
Haliburton	150	2,207	14.7	187	2,693	14.4	292	5,153	17.6
Hastings	9,794	157,977	16.1	11,349	164,560	14.5	16,703	266,914	16.0
Totals	13,776	222,000	16.1	14,778	219,677	14.9	22,031	354,794	16.1
Muskoka	341	6,138	18.0	305	4,767	15.6	458	9,278	20.3
Parry Sound	242	5,324	22.0	225	4,005	17.8	479	10,177	21.2
Algoma	77	1,155	15.0	52	858	16.5	101	1,766	17.5
Totals	660	12,617	19.1	582	9,630	16.2	1,038	21,221	20.4
The Province	67,779	1,106,462	16.3	78,293	1,271,506	16.2	124,575	2,102,453	16.9

PEASE.

TABLE No. XIII.—Showing by County Municipalities and groups of Counties the area and produce of Pease in Ontario for the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	4,399	82,217	18.7	3,748	67,801	18.1	3,505	68,210	19.5
Kent	12,878	297,739	23.1	10,670	231,646	21.7	7,517	162,932	21.7
Elgin	15,758	371,731	23.6	12,640	282,504	22.3	10,069	208,876	20.7
Norfolk	16,769	366,403	21.9	16,062	321,240	20.0	12,340	265,869	21.5
Haldimand	17,880	395,506	22.1	12,395	243,066	19.6	12,408	243,025	19.6
Welland	4,071	75,354	18.5	4,772	82,556	17.3	3,595	62,589	17.4
Totals	71,755	1,588,950	22.1	60,287	1,228,813	20.4	49,434	1,011,501	20.5
Lambton	12,341	299,836	24.3	9,605	216,977	22.6	7,472	159,044	21.3
Huron	34,181	824,788	24.1	30,942	790,878	25.6	28,646	654,397	22.8
Bruce	39,887	947,715	23.8	35,923	884,783	24.6	35,090	825,959	23.5
Totals	86,412	2,072,339	24.0	76,470	1,892,638	24.8	71,208	1,639,400	23.0
Grey	46,570	1,065,056	22.9	43,152	956,248	22.2	43,450	970,564	22.3
Simcoe	34,241	810,484	23.7	31,674	673,073	21.2	30,251	692,608	22.9
Totals	80,811	1,875,540	23.2	74,826	1,629,321	21.8	73,701	1,663,172	22.6
Middlesex	25,567	596,478	23.3	21,598	461,549	21.4	18,013	361,985	20.1
Oxford	18,449	456,428	24.7	15,906	386,198	24.3	13,152	304,476	23.2
Brant	9,989	209,769	21.0	9,429	205,081	21.7	8,315	174,661	21.0
Perth	23,125	630,388	27.3	21,556	561,965	26.1	20,594	485,509	23.6
Wellington	38,298	970,088	25.3	37,181	896,434	24.1	35,328	825,392	23.4
Waterloo	15,467	366,104	23.7	14,255	364,642	25.6	12,941	308,598	23.8
Dufferin	10,454	254,137	24.3	11,375	248,658	21.9	10,814	224,268	20.7
Totals	141,349	3,483,392	24.6	131,300	3,124,527	23.8	119,157	2,684,889	22.5
Lincoln	5,210	104,669	20.1	4,954	93,878	19.0	4,204	82,768	19.7
Wentworth	11,121	246,886	22.2	10,469	241,310	23.0	9,258	199,149	21.5
Halton	10,757	248,272	23.1	11,574	251,156	21.7	9,847	230,781	23.4
Peel	13,698	299,575	21.9	14,362	312,374	21.7	12,213	267,784	21.9
York	29,672	694,622	23 4	28,324	606,700	21.4	25,673	580,536	22.6
Ontario	29,767	736,733	24.8	24,241	524,818	21.6	24,636	547,187	22.2
Durham	21,769	517,449	23.8	19,679	406,371	20.6	21,285	451,734	21.2
Northumberland	20,831	442,659	21.3	19,251	343,053	17.8	19,576	371,165	19.0
Prince Edward	17,619	364,889	20.7	10,662	264,737	24.8	8,606	178,804	20.8
Totals	160,444	3,655,754	22.8	143,516	3,044,397	21.2	135,298	2,909,908	21.5
Lennox and Addington	9,816	209,964	21.4	9,778	189,498	19.4	8,670	176,334	20.3
Frontenac	12,607	235,247	18.7	11,165	206,106	18.5	11,765	228,935	19.5
Leeds and Grenville	6,012	124,509	20.7	6,127	123,888	20.2	6,397	129,724	20.3
Dundas	1,400	32,620	23.3	1,938	35,136	18.1	1,781	40,140	22.5
Stormont	2,573	52,489	20.4	2,725	50,876	18.7	2,847	60,210	21.1
Glengarry	6,214	110,299	17.8	7,000	124,600	17.8	6,768	121,200	17.9
Prescott	7,758	160,048	20.6	11,698	162,251	13.9	10,957	169,334	15.5
Russell	3,714	64,735	17.4	3,997	70,627	17.7	4,536	90,914	20.0
Carleton	14,012	289,208	20.6	13,204	265,797	20.1	13,569	293,183	21.6
Renfrew	23,073	439,541	19.1	22,168	413,433	18.6	20,867	431,576	20.7
Lanark	12,466	258,171	20.7	11,923	305,706	25.6	11,292	268,315	23.8
Totals	99,645	1,976,831	19.8	101,723	1,947,918	19.1	99,449	2,009,865	20.2
Victoria	16,962	382,663	22.6	16,237	317,596	19.6	15,571	329,687	21.2
Peterborough	17,046	362,398	21.3	16,472	321,204	19.5	14,957	312,202	20.9
Haliburton	1,553	33,001	21.3	1,599	26,112	16.3	1,508	29,785	19.8
Hastings	20,472	460,211	22.5	16,199	310,049	19.1	17,592	335,169	19.1
Totals	56,033	1,238,273	22.1	50,507	974,961	19.3	49,628	1,006,793	20.3
Muskoka	2,747	62,879	22.9	2,871	55,985	19.5	2,599	54,538	21.0
Parry Sound	1,133	21,856	19.3	1,349	26,832	19.9	1,291	26,497	20.5
Algoma	3,607	67,920	18.8	3,232	80,800	25.0	3,132	77,711	24.8
Totals	7,487	152,655	20.4	7,452	163,617	22.0	7,022	158,746	22.6
The Province	703,936	16,043,734	22.8	646,081	14,006,192	21.7	604,897	13,084,274	21.6

CORN.

TABLE No. XIV.—Showing by County Municipalities and groups of Counties the area and produce of Corn in Ontario in the years 1885 and 1886, with the yearly average for the four years 1882-4-5-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the four years 1882-4-5-6.		
	Acres.	Bush. (in ear.)	Bush. per acre.	Acres.	Bush. (in ear.)	Bush. per acre.	Acres.	Bush. (in ear.)	Bush. per acre.
Essex	31,294	2,347,050	75.0	32,062	2,301,731	71.8	30,434	2,336,523	76.8
Kent	26,544	1,928,422	72.7	26,397	1,762,528	66.8	25,886	1,991,391	76.9
Elgin	13,177	1,032,154	78.3	14,341	1,061,234	74.0	14,412	1,110,616	77.1
Norfolk	13,141	952,723	72.5	12,240	834,523	68.2	13,715	964,542	70.3
Haldimand	1,121	81,485	72.7	1,129	70,246	62.2	1,745	110,040	63.1
Welland	4,996	342,376	68.5	5,525	347,744	62.9	6,351	380,291	59.9
Totals	90,273	6,684,210	74.0	91,694	6,378,006	69.6	92,543	6,893,403	74.5
Lambton	5,755	373,787	65.0	6,368	413,283	64.9	6,977	428,687	61.4
Huron	1,014	79,853	78.8	1,276	104,207	81.7	1,561	106,265	68.1
Bruce	441	30,870	70.0	487	32,872	67.5	377	22,200	58.9
Totals	7,210	484,510	67.2	8,131	550,362	67.7	8,915	557,152	62.5
Grey	371	22,260	60.0	257	15,420	60.0	299	16,662	55.7
Simcoe	763	43,873	57.5	638	31,800	50.0	665	37,781	56.8
Totals	1,134	66,133	58.3	895	47,220	52.8	964	54,443	56.5
Middlesex	9,696	649,050	66.9	9,164	642,580	70.1	10,277	734,960	71.5
Oxford	7,014	465,519	66.4	7,029	456,885	65.0	8,184	533,065	65.1
Brant	3,836	276,499	72.1	3,866	265,788	68.8	4,442	323,661	72.9
Perth	460	32,200	70.0	459	32,130	70.0	585	41,511	71.0
Wellington	284	17,040	60.0	375	26,250	70.0	479	29,487	61.6
Waterloo	726	55,662	76.7	1,023	54,986	53.8	1,432	99,101	69.2
Dufferin	32	1,920	60.0	67	4,690	70.0	44	2,744	62.3
Totals	22,048	1,497,890	67.9	21,983	1,483,309	67.5	25,443	1,764,529	69.4
Lincoln	5,262	338,768	64.4	5,813	397,202	68.3	5,852	381,925	65.3
Wentworth	3,118	208,657	66.9	3,852	277,344	72.0	4,388	334,706	76.3
Halton	818	32,720	40.0	804	45,563	56.7	973	57,065	58.6
Peel	359	22,438	62.5	266	18,620	70.0	341	21,252	62.3
York	903	58,695	65.0	1,009	80,720	80.0	1,222	82,585	67.6
Ontario	2,005	126,977	63.3	1,902	76,080	40.0	2,243	130,994	58.4
Durham	1,271	74,849	58.9	1,577	67,291	42.7	1,754	98,438	56.1
Northumberland	2,982	159,626	53.5	3,503	129,611	37.0	3,448	190,734	55.3
Prince Edward	2,699	121,455	45.0	5,149	172,492	35.5	5,607	240,645	42.9
Totals	19,417	1,144,185	58.9	23,875	1,264,923	53.0	25,828	1,538,344	59.6
Lennox and Addington	1,388	78,186	56.3	1,834	100,870	55.0	2,146	107,820	50.2
Frontenac	1,172	56,256	48.0	1,803	99,165	55.0	1,617	83,834	51.8
Leeds and Grenville	3,460	225,592	65.2	4,358	202,342	46.4	4,563	259,793	56.9
Dundas	1,325	86,125	65.0	1,380	69,000	50.0	1,397	88,120	63.1
Stormont	746	44,760	60.0	1,102	66,120	60.0	1,240	65,061	52.5
Glengarry	317	22,190	70.0	661	33,050	50.0	742	31,357	42.3
Prescott	1,337	72,198	54.0	1,378	67,756	49.2	1,418	66,412	46.8
Russell	234	15,989	68.3	407	16,280	40.0	411	20,064	48.8
Carleton	1,011	38,418	38.0	1,145	77,288	67.5	1,157	57,182	49.4
Renfrew	263	18,410	70.0	473	18,920	40.0	447	25,055	56.1
Lanark	928	43,616	47.0	1,151	46,040	40.0	1,265	59,011	46.6
Totals	12,181	701,740	57.6	15,692	796,831	50.8	16,403	863,709	52.7
Victoria	237	20,145	85.0	450	22,500	50.0	397	24,593	61.9
Peterborough	159	10,601	66.7	525	27,563	52.5	329	18,214	55.4
Haliburton	73	3,650	50.0	131	6,550	50.0	128	6,361	49.7
Hastings	3,560	183,945	51.7	4,175	153,097	36.7	5,159	243,436	47.2
Totals	4,029	218,341	54.2	5,281	209,710	39.7	6,013	292,604	48.7
Muskoka	160	6,200	38.8	195	6,500	33.3	210	7,307	34.8
Parry Sound	34	1,700	50.0	28	1,680	60.0	32	1,550	48.4
Algoma	8	400	50.0	57	2,850	50.0	59	2,772	47.0
Totals	202	8,300	41.1	280	11,030	39.4	301	11,629	38.6
The Province	156,494	10,805,309	69.0	167,831	10,741,391	64.0	176,410	11,975,813	67.9

BUCKWHEAT.

TABLE No. XV.—Showing by County Municipalities and groups of Counties the area and produce of Buckwheat in Ontario in the years 1885 and 1886, with the yearly average for the four years 1882-4-5-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the four years 1882-4-5-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	660	17,932	27.2	953	30,973	32.5	610	16,359	26.8
Kent	875	18,813	21.5	991	23,536	23.7	842	20,762	24.7
Elgin	1,484	29,383	19.8	1,361	28,037	20.6	1,245	27,432	22.0
Norfolk	4,827	99,678	20.7	4,654	99,285	21.3	4,845	99,781	20.6
Haldimand	946	20,812	22.0	541	8,007	14.8	672	13,801	20.5
Welland	1,976	37,406	18.9	1,636	38,446	23.5	1,769	34,790	19.7
Totals	10,768	224,024	20.8	10,136	228,284	22.5	9,983	212,925	21.3
Lambton	312	4,265	13.7	541	12.443	23.0	435	9,818	22.6
Huron	501	8,016	16.0	253	5,376	21.2	287	5,063	17.6
Bruce	618	10,815	17.5	227	3,859	17.0	314	5,303	16.9
Totals	1,431	23,096	16.1	1,021	21,678	21.2	1,036	20,184	19.5
Grey	454	9,838	21.7	369	7,380	20.0	334	6,748	20.2
Simcoe	542	8,672	16.0	229	4,580	20.0	332	5,541	16.7
Totals	996	18,510	18.6	598	11,960	20.0	666	12,289	18.5
Middlesex	846	16,497	19.5	429	9,009	21.0	541	10,749	19.9
Oxford	572	13,345	23.3	729	14,580	20.0	652	14,776	22.7
Brant	574	13,122	22.9	725	16,131	22.2	702	15,752	22.4
Perth	193	3,860	20.0	159	3,657	23.0	133	3,112	23.4
Wellington	171	4,019	23.5	34	748	22.0	145	3,364	23.2
Waterloo	96	2,112	22.0	142	2,840	20.0	101	2,213	21.9
Dufferin	119	2,152	18.0	118	2,360	20.0	85	1,562	18.4
Totals	2,571	55,107	21.4	2,336	49,325	21.1	2,359	51,528	21.8
Lincoln	673	15,634	23.2	507	11,027	21.7	713	19,157	26.9
Wentworth	744	15,349	20.6	773	19,325	25.0	740	17,175	23.2
Halton	148	2,664	18.0	150	1,800	12.0	157	2,818	17.9
Peel	50	1,000	20.0	262	5,895	22.5	216	4,186	19.4
York	322	6,978	21.7	80	1,600	20.0	300	7,082	23.6
Ontario	504	15,120	30.0	210	4,200	20.0	362	8,667	23.9
Durham	1,390	30,066	21.6	1,019	20,380	20.0	892	18,941	21.2
Northumberland	7,707	174,872	22.7	4,505	93,839	20.8	4,586	101,909	22.2
Prince Edward	7,857	170,575	21.7	6,475	184,991	28.6	6,131	139,756	22.8
Totals	19,395	432,258	22.3	13,981	343,057	24.5	14,097	319,691	22.7
Lennox and Addington	4,548	105,059	23.1	2,164	58,796	27.2	2,760	73,401	26.6
Frontenac	1,698	39,411	23.2	1,333	37,764	28.3	1,477	37,742	25.6
Leeds and Grenville	5,071	122,110	24.1	5,632	147,840	26.2	5,500	136,781	24.9
Dundas	1,423	44,725	31.4	1,599	54,366	34.0	1,401	41,732	29.8
Stormont	1,903	66,605	35.0	2,336	70,080	30.0	2,178	60,820	27.9
Glengarry	688	15,480	22.5	618	17,922	29.0	979	26,945	27.5
Prescott	1,507	40,900	27.1	2,025	44,550	22.0	1,744	40,562	23.2
Russell	1,228	39,296	32.0	768	13,824	18.0	1,043	26,739	25.6
Carleton	3,912	106,054	27.1	3,926	104,039	26.5	3,835	94,342	24.6
Renfrew	1 312	40,672	31.0	1,457	38,319	26.3	1.125	29,437	26.2
Lanark	5,699	136,776	24.0	6,157	159,282	25.9	6,500	170.295	26.2
Totals	28,989	757,088	26.1	28.015	746,782	26.7	28,542	738,736	25.9
Victoria	370	5,550	15.0	369	3,690	10.0	420	7,124	17.0
Peterborough	850	20,400	24.0	842	18,735	22.0	689	16,211	23.5
Haliburton	185	4,163	22.5	344	3.440	10.0	278	4.056	14.6
Hastings	4,916	128,996	26.2	3,576	91,939	25.7	3,561	93,748	26.3
Totals	6,321	159,109	25.2	5,131	117,804	23.0	4,948	121,139	24.5
Muskoka	241	7,953	33.0	258	4,902	19.0	298	8,269	27.7
Parry Sound	65	1,300	20.0	247	5,558	22.5	140	3,346	23.9
Algoma	15	263	17.5	53	1,325	25.0	41	1,124	27.4
Totals	321	9,516	29.6	558	11,785	21.1	479	12,739	26.6
The Province	70,792	1,678,708	23.7	61,776	1,530,675	24.8	62,110	1,489,231	24.0

BEANS.

TABLE No. XVI.—Showing by County Municipalities and groups of Counties the area and produce of Beans in Ontario in the years 1885 and 1886, with the yearly average for the four years 1882-4-5-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the four years 1882-4-5-6.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	483	12,075	25.0	694	22,555	32.5	488	13,129	26.9
Kent	12,069	267,932	22.2	14,201	262,719	18.5	10,829	225,643	20.8
Elgin	883	23,550	26.7	1,182	27,186	23.0	1,098	26,044	23.7
Norfolk	350	6,139	17.5	644	10,089	15.7	789	14,922	18.9
Haldimand	35	525	15.0	94	1,410	15.0	147	3,168	21.5
Welland	479	9,523	19.9	651	8,658	13.3	811	13,310	16.4
Totals	14,299	319,744	22.4	17,466	332,617	19.0	14,162	296,216	20.9
Lambton	359	7,259	20.2	450	9,581	21.3	370	7,986	21.6
Huron	182	5,460	30.0	116	2,900	25.0	124	3,435	27.7
Bruce	162	1,944	12.0	111	2,442	22.0	104	1,704	16.4
Totals	703	14,663	20.9	677	14,923	22.0	598	13,125	21.9
Grey	96	2,176	22.7	135	2,025	15.0	114	1,916	16.8
Simcoe	106	2,650	25.0	101	2,020	20.0	105	2,056	19.6
Totals	202	4,826	23.9	236	4,045	17.1	219	3,972	18.1
Middlesex	228	4,332	19.0	336	6,552	19.5	371	7,125	19.2
Oxford	126	3,150	25.0	206	5,150	25.0	241	7,123	29.6
Brant	209	4,347	20.8	325	4,956	15.2	668	12,309	18.4
Perth	30	900	30.0	31	620	20.0	56	1,485	26.5
Wellington	55	1,100	20.0	43	645	15.0	31	612	19.7
Waterloo	62	1,240	20.0	29	580	20.0	37	771	20.8
Dufferin	33	660	20.0	6	120	20.0	15	290	19.3
Totals	743	15,729	21.2	976	18,623	19.1	1,419	29,715	20.9
Lincoln	125	2,813	22.5	169	3,380	20.0	159	3,418	21.5
Wentworth	66	1,980	30.0	91	1,820	20.0	132	2,743	20.8
Halton	81	1,620	20.0	38	760	20.0	44	848	19.3
Peel	40	800	20.0	31	744	24.0	64	1,752	27.4
York	65	2,059	31.7	173	4,325	25.0	148	4,266	28.8
Ontario	117	3,510	30.0	191	4,775	25.0	353	8,232	23.3
Durham	235	4,794	20.4	316	6,162	19.5	316	6,933	21.9
Northumberland	345	10,902	31.6	364	7,400	20.3	559	12,459	22.3
Prince Edward	832	15,533	18.7	264	6,204	23.5	493	11,493	23.3
Totals	1,906	44,011	23.1	1,637	35,570	21.7	2,268	52,144	23.0
Lennox and Addington	221	3,536	16.0	91	1,426	15.7	174	3,305	19.6
Frontenac	401	11,160	27.8	366	11,591	31.7	363	10,466	28.8
Leeds and Grenville	314	9,106	29.0	386	6,689	17.3	380	8,383	22.1
Dundas	194	5,626	29.0	120	2,400	20.0	169	4,583	27.1
Stormont	74	1,665	22.5	84	3,360	40.0	147	4,406	30.0
Glengarry	100	3,000	30.0	48	1,200	25.0	96	2,902	30.2
Prescott	345	8,798	25.5	592	13,024	22.0	549	17,342	31.6
Russell	158	2,370	15.0	266	7,315	27.5	265	6,244	23.6
Carleton	428	10,028	23.4	471	12,717	27.0	488	12,065	24.7
Renfrew	419	13,127	31.3	397	14,954	37.7	482	12,528	26.0
Lanark	108	3,060	28.3	185	3,885	21.0	211	5,268	25.0
Totals	2,762	71,476	25 9	3,006	78,561	26.1	3,324	87,492	26.3
Victoria	57	1,140	20.0	47	940	20.0	86	1,635	19.0
Peterborough	90	2,100	23.3	315	3,150	10.0	177	2,752	15.5
Haliburton	14	350	25.0	47	940	20.0	25	522	20.9
Hastings	253	6,768	26.8	184	5,520	30.0	259	6,150	23.7
Total	414	10,358	25.0	593	10,550	17.8	547	11,059	20.2
Muskoka	27	945	35.0	38	1,235	32.5	38	933	24.6
Parry Sound	7	140	20.0	17	340	20.0	16	371	23.2
Algoma	9	180	20.0	5	100	20.0	6	121	20.2
Totals	43	1,265	29.4	60	1,675	27.9	60	1,425	23.8
The Province	21,072	482,072	22.9	24,651	496,564	20.1	22,597	495,148	21.9

HAY AND CLOVER.

TABLE No. XVII.—Showing by County Municipalities and groups of Counties the area and produce of Hay and Clover in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Tons.	Tons per acre.	Acres.	Tons.	Tons per acre.	Acres.	Tons.	Tons per acre.
Essex	36,290	51,895	1.43	38,796	69,057	1.78	34,551	54,030	1.56
Kent	51,843	64,804	1.25	54,982	93,469	1.70	50,199	75,733	1.51
Elgin	47,691	64,261	1.35	50,217	80,849	1.61	48,269	71,755	1.49
Norfolk	38,754	54,256	1.40	40,405	56,163	1.39	40,745	58,638	1.44
Haldimand	49,330	69,555	1.41	50,477	74,201	1.47	49,244	69,423	1.41
Welland	48,720	62,862	1.28	46,055	67,240	1.46	45,265	64,836	1.43
Totals	272,538	367,133	1.35	280,932	440,979	1.57	268,273	394,415	1.47
Lambton	55,639	63,985	1.15	54,876	92,740	1.69	52,036	75,658	1.45
Huron	93,660	119,885	1.28	93,628	145,124	1.56	89,635	125,984	1.40
Bruce	82,250	91,298	1.11	79,597	96,312	1.21	76,726	94,527	1.23
Totals	231,549	275,168	1.19	227,501	334,176	1.47	218,397	296,119	1.36
Grey	114,036	114,036	1.00	116,709	131,881	1.13	109,462	130,055	1.19
Simcoe	71,988	88,545	1.23	73,884	84,228	1.14	71,860	98,633	1.37
Totals	186,024	202,581	1.09	190,593	216,109	1.13	181,322	228,688	1.26
Middlesex	89,057	120,227	1.35	91,902	154,395	1.68	88,187	138,003	1.56
Oxford	60,767	88,112	1.45	64,076	107,648	1.68	62,276	96,847	1.56
Brant	32,276	41,959	1.30	31,425	47,138	1.50	32,708	49,992	1.53
Perth	65,953	81,782	1.24	67,690	106,273	1.57	65,140	99,167	1.52
Wellington	83,774	118,121	1.41	80,964	132,781	1.64	79,667	125,758	1.58
Waterloo	43,138	68,158	1.58	42,115	61,909	1.47	42,583	69,735	1.64
Dufferin	32,987	31,668	.96	34,115	46,738	1.37	31,991	43,665	1.36
Totals	407,952	550,027	1.35	412,287	656,882	1.59	402,552	623,167	1.55
Lincoln	44,221	62,794	1.42	40,722	68,006	1.67	40,309	56,174	1.39
Wentworth	45,918	51,020	1.11	45,226	71,005	1.57	45,168	69,185	1.53
Halton	34,286	42,858	1.25	34,307	55,577	1.62	34,223	52,128	1.52
Peel	38,717	61,560	1.59	38,157	56,854	1.49	37,543	59,974	1.60
York	73,740	92,175	1.25	75,354	103,235	1.37	71,817	104,297	1.45
Ontario	53,531	77,085	1.44	52,274	77,366	1.48	51,560	77,797	1.51
Durham	44,864	65,501	1.46	43,467	59,115	1.36	44,143	64,485	1.46
Northumberland	56,344	81,135	1.44	54,585	73,690	1.35	52,409	71,339	1.36
Prince Edward	35,997	53,996	1.50	32,994	54,110	1.64	30,241	43,312	1.43
Totals	427,618	588,124	1.38	417,086	618,958	1.48	407,413	598,691	1.47
Lennox and Addington	49,821	79,215	1.59	44,928	67,841	1.51	42,624	60,011	1.41
Frontenac	64,473	78,012	1.21	62,340	86,029	1.38	59,925	80,138	1.34
Leeds & Grenville	121,956	152,445	1.25	108,729	188,101	1.73	106,532	151,125	1.42
Dundas	34,903	54,100	1.55	35,378	60,496	1.71	33,099	52,163	1.58
Stormont	32,460	48,690	1.50	31,292	50,067	1.60	30,284	46,823	1.55
Glengarry	33,611	54,786	1.63	32,855	45,011	1.37	32,982	51,835	1.57
Prescott	31,473	45,951	1.46	29,809	29,809	1.00	28,370	39,790	1.49
Russell	16,757	21,617	1.29	19,345	18,184	.94	17,398	22,497	1.29
Carleton	69,410	85,782	1.42	58,211	72,751	1.25	55,730	73,945	1.33
Renfrew	59,895	76,666	1.28	58,721	39,147	.67	58,380	65,484	1.12
Lanark	63,269	92,373	1.46	61,280	92,533	1.51	57,484	82,644	1.44
Totals	569,028	789,637	1.39	542,888	749,969	1.38	522,758	726,455	1.39
Victoria	38,159	43,120	1.13	39,401	46,099	1.17	36,757	45,462	1.24
Peterborough	38,111	50,688	1.33	41,244	43,806	1.05	37,570	46,441	1.24
Haliburton	10,666	9,813	.92	9,467	9,467	1.00	9,555	9,943	1.04
Hastings	73,361	81,431	1.11	65,968	91,036	1.38	65,139	87,174	1.34
Totals	160,297	185,052	1.15	156,080	189,908	1.22	149,021	188,999	1.27
Muskoka	22,700	22,473	.99	20,586	22,233	1.08	19,088	21,824	1 14
Parry Sound	8,470	6,353	.75	10,179	10,891	1.07	8,995	9,724	1.08
Algoma	8,975	7,898	.88	9,959	12,050	1.21	8,875	11,464	1.29
Totals	40,145	36,724	.91	40,724	45,174	1.11	36,958	43,012	1.16
The Province	2,295,151	2,994,446	1.35	2,268,091	3,252,155	1.43	2,186,694	3,099,555	1.42

POTATOES.

TABLE No. XVIII.—Showing by County Municipalities and groups of Counties the area and produce of Potatoes in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	2,669	240,610	90.2	3,024	310,656	102.7	2,870	335,479	116.9
Kent	3,288	387,294	117.8	3,503	356,885	101.9	3,644	520,445	142.8
Elgin	2,445	281,786	115.3	2,751	189,598	68.9	2,950	305,562	103.6
Norfolk	2,778	241,464	86.9	3,478	237,651	68.3	3,733	440,472	118.0
Haldimand	1,213	152,341	125.6	1,907	227,772	119.4	1,622	195,495	120.5
Welland	1,800	167,058	92.8	2,683	217,430	81.0	2,523	263,191	104.3
Totals	14,193	1,470,553	103.6	17,346	1,539,992	88.8	17,342	2,060,644	118.8
Lambton	2,474	245,495	99.2	3,156	299,283	94.8	3,111	340,209	109.4
Huron	4,688	433,968	92.6	5,380	955,488	177.6	5,261	680,701	129.4
Bruce	4,465	363,898	81.5	4,955	913,355	184.3	4,912	572,575	116.6
Totals	11,627	1,043,361	89.7	13,491	2,168,126	160.7	13,284	1,593,485	120.0
Grey	6,376	653,221	102.5	7,436	1,418,045	190.7	7,202	909,046	126.2
Simcoe	6,303	746,653	118.5	6,914	1,269,894	183.7	6,835	917,407	134.2
Totals	12,679	1,399,874	110.4	14,350	2,687,939	187.3	14,037	1,826,453	130.1
Middlesex	5,224	590,730	113.1	5,852	421,344	72.0	5,968	660,623	110.7
Oxford	2,665	286,754	107.6	3,351	203,640	60.8	3,499	384,648	109.9
Brant	1,873	222,419	118.8	2,382	276,574	116.1	2,272	276,788	121.8
Perth	3,194	308,221	96.5	3,970	466,475	117.5	3,983	457,291	114.8
Wellington	5,053	576,143	114.0	6,154	801,620	130.3	6,040	750,265	124.2
Waterloo	2,637	238,332	90.4	3,033	453,585	149.6	2,994	378,457	126.4
Dufferin	2,504	287,008	114.6	3,521	504,136	143.2	3,099	438,789	141.6
Totals	23,150	2,509,607	108.4	28,263	3,127,374	110.7	27,855	3,346,861	120.2
Lincoln	1,751	193,118	110.3	1,735	154,294	88.9	1,991	201,398	101.2
Wentworth	3,028	324,753	107.3	3,359	505,362	150.4	3,717	481,191	129.5
Halton	1,390	125,726	90.5	1,712	278,200	162.5	1,697	208,087	122.6
Peel	2,373	248,168	104.6	2,912	330,715	113.6	2,848	332,886	116.9
York	6,388	652,854	102.2	8,230	588,445	71.5	7,741	747,251	96.5
Ontario	3,443	446,833	129.8	3,817	490,752	128.6	3,979	495,616	124.6
Durham	2,891	421,826	145.9	3,024	376,307	124.4	3,182	440,855	138.5
Northumberland	3,708	352,260	95.0	4,071	438,569	107.7	4,180	485,932	116.3
Prince Edward	2,713	272,277	100.4	2,156	242,550	112.5	2,487	244,652	98.4
Totals	27,685	3,037,815	109.7	31,016	3,405,194	109.8	31,822	3,637,868	114.3
Lennox and Addington	3,086	360,507	116.8	3,691	573,581	155.4	3,448	432,133	125.3
Frontenac	3,493	464,814	133.1	3,914	292,415	74.7	4,123	445,970	108.2
Leeds and Grenville	6,379	780,917	122.4	7,360	1,166,118	158.4	7,387	957,481	129.6
Dundas	2,321	247,187	106.5	2,578	547,825	212.5	2,513	402,785	160.3
Stormont	2,045	224,950	110.0	2,050	256,250	125.0	2,149	281,641	131.1
Glengarry	2,443	210,098	86.0	2,762	379,775	137.5	2,590	315,148	121.7
Prescott	2,519	333,012	132.2	2,545	325,404	127.9	2,462	306,572	124.5
Russell	1,534	116,016	75.6	1,716	226,512	132.0	1,592	171,051	107.4
Carleton	5,828	616,078	105.7	6,292	935,935	148.7	6,197	850,491	137.2
Renfrew	4,038	663,888	164.4	3,919	718,157	183.2	3,805	634,142	166.7
Lanark	3,456	438,048	126.8	3,909	685,639	175.4	3,708	582,812	157.2
Totals	37,142	4,455,515	120.0	40,736	6,107,611	149.9	39,974	5,380,226	134.6
Victoria	2,692	365,654	135.8	3,046	385,837	126.7	2,894	391,760	135.4
Peterborough	2,477	345,467	139.5	2,598	333,687	128.4	2,544	337,781	132.8
Haliburton	543	105,282	193.9	648	77,112	119.0	703	107,251	152.6
Hastings	5,425	808,813	149.1	5,529	854,507	154.6	6,137	797,936	130.1
Totals	11,137	1,625,216	145.9	11,821	1,651,143	139.7	12,278	1,634,728	133.1
Muskoka	1,270	247,320	194.7	1,389	160,721	115.7	1,281	185,432	144.8
Parry Sound	593	117,491	198.1	628	120,369	191.7	695	115,750	166.5
Algoma	667	105,606	158 3	701	122,675	175.0	665	115,091	173.1
Totals	2,530	470,417	185.9	2,718	403,765	148.6	2,641	416,273	157.6
The Province	140,143	16,012,358	114.3	159,741	21,091,144	132.0	159,233	19,896,538	125.0

MANGEL-WURZELS.

TABLE No. XIX.—Showing by County Municipalities and groups of Counties the area and produce of Mangel-wurzels in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.	Acres.	Bush.	Bush. per acre.
Essex	213	106,500	500.0	270	108,000	400.0	190	83,011	436.9
Kent	259	142,996	552.1	288	163,541	567.8	254	112,553	443.1
Elgin	258	135,450	525.0	267	125,490	470.0	258	103,950	402.9
Norfolk	235	114,823	488.6	153	68,212	445.8	168	70,332	418.6
Haldimand	127	40,217	316.7	102	38,760	380.0	112	36,833	328.9
Welland	110	73,334	666.7	135	60,000	444.4	127	52,476	413.2
Totals	1,202	613,320	510.2	1,215	564,003	464.2	1,109	459,155	414.0
Lambton	290	135,679	467.9	294	116,665	396.8	341	128,916	378.1
Huron	1,549	834,586	538.8	1,205	578,400	480.0	1,372	656,706	478.6
Bruce	335	163,085	486.8	328	201,868	615.4	424	197,153	465.0
Totals	2,174	1,133,350	521.3	1,827	896,933	490.9	2,137	982,775	459.9
Grey	346	164,783	476.3	235	121,417	516.7	362	178,253	492.4
Simcoe	637	345,573	542.5	738	326,831	442.9	694	303,428	437.2
Totals	983	510,356	519.2	973	448,248	460.7	1,056	481,681	456.1
Middlesex	1,424	757,767	532.1	1,195	500,406	418.7	1,188	528,766	445.1
Oxford	1,186	622,911	525.2	944	411,924	436.4	1,006	500,423	497.4
Brant	390	196,775	504.6	396	247,500	625.0	340	184,093	541.5
Perth	1,457	864,831	593.6	1,465	763,895	521.4	1,379	676,279	490.4
Wellington	945	474,683	502.3	786	318,000	404.6	829	399,412	481.8
Waterloo	383	174,744	456.3	374	164,560	440.0	442	222,073	502.4
Dufferin	84	44,800	533.3	210	84,000	400.0	136	55,256	406.3
Totals	5,869	3,136,511	534.4	5,370	2,490,285	463.7	5,320	2,566,302	482.4
Lincoln	233	90,446	388.2	202	78,107	386.7	223	80,965	363.1
Wentworth	312	204,001	653.9	473	253,055	535.0	425	230,991	543.5
Halton	488	210,450	431.3	374	175,780	470.0	406	172,684	425.3
Peel	400	140,000	350.0	370	98,668	266.7	396	159,092	401.7
York	1,893	866,048	457.5	1,635	960,563	587.5	1,708	856,250	501.3
Ontario	698	290,836	416.7	722	315,514	437.0	811	336,414	414.8
Durham	439	187,795	427.8	398	190,244	478.0	439	199,549	454.6
Northumberland	486	201,029	413.6	489	210,270	430.0	444	201,483	453.8
Prince Edward	151	80,533	533.3	146	32,850	225.0	129	35,306	273.7
Totals	5,100	2,271,138	445.3	4,809	2,315,051	481.4	4,981	2,272,734	456.3
Lennox and Addington	130	39,558	304.3	43	12,900	300.0	106	34,720	327.5
Frontenac	286	112,793	394.4	117	64,935	555.0	166	65,890	396.9
Leeds and Grenville	167	73,323	439.1	177	88,500	500.0	193	91,977	476.6
Dundas	209	78,375	375.0	113	48,966	433.3	123	51,201	416.3
Stormont	43	14,333	333.3	44	19,800	450.0	39	15,885	407.3
Glengarry	44	13,200	300.0	54	27,000	500.0	55	17,700	321.8
Prescott	26	12,838	493.8	53	13,250	250.0	49	17,258	352.2
Russell	80	21,334	266.7	32	9,600	300.0	58	16,925	291.8
Carleton	566	210,450	371.8	517	212,833	411.7	543	222,905	410.5
Renfrew	113	52,734	466.7	115	34,020	295.8	111	44,153	397.8
Lanark	106	43,283	408.3	134	49,134	366.7	155	65,886	425.1
Totals	1,770	672,221	379.8	1,399	580,968	415.3	1,598	644,500	403.3
Victoria	477	230,548	483.3	282	151,575	537.5	422	206,790	490.0
Peterborough	239	97,194	406.7	308	132,440	430.0	278	109,290	393.1
Haliburton	18	7,200	400.0	1	300	300.0	7	2,652	378.9
Hastings	253	89,605	354.2	190	63,333	333.3	215	67,874	315.7
Totals	987	424,547	430.1	781	347,648	445.1	922	386,606	419.3
Muskoka	54	15,750	291.7	29	8,023	276.7	34	9,529	280.3
Parry Sound	3	750	250.0	6	1,800	300.0	12	2,566	213.8
Algoma	28	9,800	350.0	26	7,800	300.0	22	7,570	344.1
Totals	85	26,300	309.4	61	17,623	288.9	68	19,665	289.2
The Province	18,170	8,787,743	483.6	16,435	7,660,729	466.1	17,191	7,813,418	454.5

CARROTS.

TABLE No. XX.—Showing by County Municipalities and groups of Counties the area and produce o Carrots in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	87	23,200	266.7	89	32,819	368.7	71	21,633	304.7
Kent	171	56,804	332.2	152	63,840	420.0	134	41,425	309.1
Elgin	104	44,497	427.9	140	44,645	318.9	129	37,717	292.4
Norfolk	108	37,516	347.4	90	27,975	310.8	109	35,020	321.3
Haldimand	91	21,840	240.0	76	25,080	330.0	71	17,713	249.5
Welland	52	24,440	470.0	63	23,850	378.6	68	20,241	297.7
Totals	613	208,297	339.8	610	218,209	357.7	582	173,749	298.5
Lambton	158	55,893	353.8	152	47,880	315.0	164	48,804	297.6
Huron	457	182,206	398.7	406	203,812	502.0	536	227,837	425.1
Bruce	241	84,391	350.2	199	92,867	466.7	298	109,503	367.5
Totals	856	322,490	376.7	757	344,559	455.2	998	386,144	386.9
Grey	540	212,760	394.0	505	221,887	439.4	584	238,261	408.0
Simcoe	556	237,846	427.8	574	213,201	371.4	615	243,935	396.6
Totals	1,096	450,606	411.1	1,079	435,088	403.2	1,199	482,196	402.2
Middlesex	476	177,353	372.6	458	130,965	286.0	474	155,054	327.1
Oxford	279	120,511	431.9	287	91,318	318.2	334	144,617	433.0
Brant	152	68,262	449.1	206	104,471	507.1	223	101,381	454.6
Perth	350	165,340	472.4	452	192,100	425.0	430	183,294	426.3
Wellington	254	79,586	313.3	205	72,176	352.1	286	103,655	362.4
Waterloo	319	156,310	490.0	253	101,903	402.8	313	148,330	473.9
Dufferin	123	49,200	400.0	124	43,400	350.0	164	58,963	359.5
Totals	1,953	816,562	418.1	1,985	736,333	370.9	2,224	895,294	402.6
Lincoln	97	32,980	340.0	97	32,773	337.9	107	34,174	319.4
Wentworth	142	67,450	475.0	220	95,823	435.6	212	90,379	426.3
Halton	164	67,240	410.0	86	27,950	325.0	124	48,860	394.0
Peel	269	78,459	291.7	258	60,199	233.3	312	114,323	366.4
York	580	228,131	393.3	639	343,463	537.5	765	342,921	448.3
Ontario	508	193,431	380.8	471	197,820	420.0	561	209,129	372.8
Durham	418	168,922	404.1	460	186,760	406.0	485	194,535	401.1
Northumberland	238	86,503	363.5	216	68,580	317.5	247	87,041	352.4
Prince Edward	31	7,750	250.0	29	5,800	200.0	41	7,071	172.5
Totals	2,447	930,866	380.4	2,476	1,019,168	411.6	2,854	1,128,433	395.4
Lennox and Addington	59	16,891	286.3	56	12,600	225.0	52	14,430	277.5
Frontenac	226	64,598	285.8	111	43,013	387.5	139	38,747	278.8
Leeds and Grenville	158	47,307	299.4	111	30,525	275.0	144	46,108	320.2
Dundas	57	17,100	300.0	28	7,000	250.0	43	15,470	359.8
Stormont	14	5,600	400.0	13	2,600	200.0	31	10,835	349.5
Glengarry	43	8,600	200.0	31	6,200	200.0	35	8,550	244.3
Prescott	45	18,900	420.0	43	8,600	200.0	45	13,047	289.9
Russell	97	27,483	283.3	125	41,667	333.3	105	32,947	313.8
Carleton	526	163,938	311.7	462	167,092	361.7	533	199,899	375.0
Renfrew	104	39,000	375.0	98	22,214	226.7	114	38,972	341.9
Lanark	142	43,783	308.3	106	46,375	437.5	142	54,246	382.0
Totals	1,471	453,200	308.1	1,184	387,886	327.6	1,383	473,251	342.2
Victoria	274	113,252	413.3	275	105,251	382.7	266	99,337	373.4
Peterborough	272	92,480	340.0	340	100,038	294.2	329	108,264	329.1
Haliburton	25	12,500	500.0	12	3,300	275.0	17	5,678	334.0
Hastings	139	46,148	332.0	170	76,500	450.0	129	41,989	325.5
Totals	710	264,380	372.4	797	285,089	357.7	741	255,268	344.5
Muskoka	76	17,100	225.0	76	17,987	236.7	69	18,134	262.8
Parry Sound	20	9,000	450.0	19	5,700	300.0	25	6,890	275.6
Algoma	25	6,250	250.0	41	12,300	300.0	27	7,177	265.8
Totals	121	32,350	267.3	136	35,987	264.6	121	32,201	266.1
The Province	9,267	3,478,751	375.4	9,024	3,462,319	383.7	10,101	3,826,536	378.8

TURNIPS.

TABLE No. XXI.—Showing by County Municipalities and groups of Counties the area and produce of Turnips in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average yield per acre.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per. acre.
Essex	152	51,490	338.8	294	107,800	366.7	217	70,558	325.2
Kent	266	89,315	335.8	367	183,500	500.0	373	134,970	361.8
Elgin	240	96,343	401.4	253	89,562	354.0	338	115,562	341.9
Norfolk	838	394,078	470.3	608	232,730	382.2	652	275,578	422.7
Haldimand	70	18,500	264.3	50	13,333	266.7	71	19,084	268.8
Welland	163	73,350	450.0	92	41,400	450.0	148	56,889	384.4
Totals	1,729	723,076	448.2	1,664	668,325	401.6	1,799	672,641	373.9
Lambton	219	91,980	420.0	174	47,960	275.6	283	96,521	341.1
Huron	5,738	2,835,146	494.1	6,915	2,808,112	406.1	6,660	2,610,147	391.9
Bruce	5,269	2,537,919	481.7	5,650	3,077,216	544.6	5,370	2,268,544	422.4
Totals	11,226	5,465,045	486.8	12,739	5,933,288	465.8	12,313	4,975,212	404.1
Grey	8,323	3,999,784	480.6	8,983	4,096,787	456.1	8,503	3,717,478	437.2
Simcoe	3,857	1,836,279	476.1	3,171	1,407,131	443.7	3,146	1,343,350	427.0
Totals	12,180	5,836,063	479.2	12,154	5,503,918	452.8	11,649	5,060,828	434.4
Middlesex	1,546	700,694	453.2	1,579	514,896	326.1	1,591	601,436	378.0
Oxford	4,969	2,521,768	507.5	5,112	1,905,396	372.7	4,962	2,091,796	421.6
Brant	2,427	1,234,736	508.8	2,491	1,314,003	527.5	2,219	1,103,889	497.5
Perth	4,095	2,221,538	542.5	5,014	1,591,945	317.5	4,879	1,881,217	385.6
Wellington	12,243	6,833,553	558.2	13,293	5,339,399	401.7	12,826	5,689,766	443.6
Waterloo	4,881	2,391,690	490.0	5,140	1,773,300	345.0	5,107	2,079,370	407.2
Dufferin	2,002	871,711	435.4	2,502	771,450	308.3	2,279	870,936	382.2
Totals	32,163	16,775,690	521.6	35,131	13,210,389	376.0	33,863	14,318,410	422.8
Lincoln	216	81,197	375.9	180	54,643	303.6	205	66,735	325.5
Wentworth	2,390	1,441,959	603.3	2,134	1,202,808	563.6	1,995	1,016,628	509.6
Halton	1,824	861,329	472.2	1,607	666,905	415.0	1,554	702,712	452.2
Peel	1,261	483,379	383.3	1,160	328,663	283.3	1,174	443,846	378.1
York	2,824	1,259,024	445.8	3,009	1,375,534	457.1	2,751	1,116,116	405.7
Ontario	11,646	5,283,091	453.6	11,767	4,394,268	373.4	10,901	4,223,240	387.4
Durham	5,951	2,540,006	426.8	5,355	2,506,140	468.0	4,965	2,229,377	449.0
Northumberland	3,410	1,459,275	427.9	3,277	1,433,688	437.5	2,813	1,095,025	389.3
Prince Edward	106	39,220	370.0	36	10,800	300.0	98	19,786	201.9
Totals	29,628	13,448,480	453.9	28,525	11,973,449	419.8	26,456	10,913,465	412.5
Lennox and Addington	95	25,531	268.8	173	51,900	300.0	180	43,618	242.3
Frontenac	558	183,554	329.0	531	207,090	390.0	357	109,114	305.6
Leeds and Grenville	195	68,576	351.7	156	76,701	491.7	206	80,873	392.6
Dundas	42	14,000	333.3	42	12,600	300.0	64	18,652	291.4
Stormont	95	33,250	350.0	93	23,250	250.0	100	23,996	240.0
Glengarry	65	29,250	450.0	32	9,600	300.0	30	10,272	342.4
Prescott	135	69,694	516.3	113	56,500	500.0	99	42,932	433.7
Russell	216	73,801	341.7	238	83,300	350.0	248	80,251	323.6
Carleton	1,534	617,435	402.5	1,464	519,720	355.0	1,351	502,658	372.1
Renfrew	614	226,063	368.2	676	199,981	295.8	578	197,148	341.1
Lanark	580	209,444	361.1	314	130,834	416.7	410	154,922	377.9
Totals	4,129	1,550,598	375.5	3,832	1,371,476	357.9	3,623	1,264,436	349.0
Victoria	3,110	1,521,692	489.3	3,673	1,122,506	305.6	2,905	1,097,632	377.8
Peterborough	1,258	497,954	395.8	1,109	363,198	327.5	960	355,792	370.6
Haliburton	281	117,669	418.8	407	88,185	216.7	322	85,249	264.7
Hastings	913	335,856	367.9	586	217,658	371.4	622	180,546	290.3
Totals	5,562	2,473,171	444.7	5,775	1,791,547	310.2	4,809	1,719,219	357.5
Muskoka	1,091	377,955	346.4	1,143	315,879	276.4	898	275,494	306.8
Parry Sound	540	189,000	350.0	752	222,464	295.8	632	190,244	301.0
Algoma	683	221,975	325.0	588	147,000	250.0	495	178,818	361.2
Totals	2,314	788,930	340.9	2,483	685,343	276.0	2,025	644,556	318.3
The Province	98,931	47,061,053	475.7	102,303	41,137,735	402.1	96,537	39,568,767	409.9

RATIOS OF AVERAGE PRODUCE.

TABLE No. XXII.—Showing by County Municipalities and groups of Counties the per cent. ratios of total yields in 1886 to average of total yields for the five years 1882-6.

Counties.	Fall Wheat.	Spring Wheat.	Fall and Spg Wheat.	Barley.	Oats.	Rye.	Peas.	Corn.	Buckwheat.	Beans.	Hay and Clover.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.
Essex	107	85	106	132	119	82	121	100	110	92	96	72	128	107	73
Kent	107	134	108	93	109	88	183	9[illegible]	91	119	86	74	127	137	66
Elgin	104	131	105	97	104	83	178	93	107	90	90	92	130	118	83
Norfolk	85	84	85	83	85	77	138	99	100	41	93	55	163	107	143
Haldimand	91	78	90	100	97	23	163	74	151	17	100	78	109	123	97
Welland	112	67	109	74	97	83	120	90	108	72	96	63	140	121	129
Group	102	100	101	95	103	74	157	97	105	108	93	71	134	120	107
Lambton	96	102	97	97	104	22	189	87	43	91	85	72	105	115	95
Huron	101	77	97	85	102	136	126	75	158	159	95	64	127	80	109
Bruce	92	108	95	104	107	73	115	139	204	114	97	64	83	77	112
Group	97	92	96	94	104	83	126	87	114	112	93	65	115	84	110
Grey	71	76	74	98	109	28	110	134	146	114	88	72	92	89	108
Simcoe	60	117	78	109	125	37	117	116	157	129	90	81	114	98	137
Group	64	94	76	104	116	35	113	121	151	122	89	77	106	93	115
Middlesex	89	101	90	86	101	46	165	88	153	61	87	89	143	114	117
Oxford	93	85	91	83	104	71	150	87	90	44	91	75	124	83	121
Brant	78	75	78	107	84	54	120	85	83	35	84	80	107	67	112
Perth	101	64	94	75	106	67	130	78	124	61	82	67	128	90	118
Wellington	87	75	83	99	110	42	118	58	119	180	94	77	119	77	120
Waterloo	87	66	85	90	94	54	119	56	95	161	98	63	79	105	115
Dufferin	79	95	88	126	118	86	113	70	138	228	73	65	81	83	100
Group	89	82	88	94	104	62	130	85	107	53	88	75	122	91	117
Lincoln	95	66	92	62	82	54	126	89	82	82	112	96	112	97	122
Wentworth	74	77	75	93	89	22	124	62	89	72	74	71	88	75	142
Halton	66	74	67	96	88	35	108	57	95	191	82	60	122	138	123
Peel	78	67	75	95	90	23	112	106	24	46	103	75	88	69	109
York	64	90	73	112	106	28	120	71	99	48	88	87	101	67	113
Ontario	39	109	93	117	119	35	135	97	174	43	99	90	86	92	125
Durham	94	72	74	126	108	65	115	76	159	69	102	96	94	87	114
Northumberland	103	79	86	102	166	59	119	84	172	88	114	72	100	99	133
Prince Edward	64	80	76	81	119	79	204	50	122	135	125	111	228	110	198
Group	73	86	79	106	103	56	126	74	135	84	98	84	100	82	123
Lennox and Addington	79	80	80	89	107	61	119	73	143	107	132	83	114	117	59
Frontenac	39	87	76	67	100	15	103	67	104	107	97	104	171	167	168
Leeds and Grenville	61	103	89	91	107	23	96	87	89	109	101	82	80	103	85
Dundas	23	135	109	65	116	47	81	98	107	123	104	61	153	111	75
Stormont	37	121	106	65	111	38	87	69	110	38	104	80	90	52	139
Glengarry	24	124	115	101	95	24	91	71	57	103	106	67	75	101	285
Prescott	6	148	147	167	128	79	95	109	101	51	115	109	74	145	162
Russell	7	111	105	103	114	....	71	80	147	38	96	68	126	83	92
Carleton	8	90	85	125	99	41	99	67	112	83	116	72	94	82	123
Renfrew	20	92	89	125	111	67	102	73	138	105	117	105	119	100	115
Lanark	55	94	85	109	107	29	96	74	80	58	112	75	66	81	135
Group	47	102	93	88	107	41	98	81	102	82	109	83	104	96	123
Victoria	109	82	89	119	115	56	116	82	78	70	95	93	111	114	139
Peterborough	109	109	109	110	108	83	116	58	126	76	109	102	89	85	140
Haliburton	93	109	108	85	133	43	111	57	103	67	99	98	271	220	138
Hastings	102	77	86	97	115	59	137	76	138	110	93	101	132	110	186
Group	107	89	95	107	114	63	123	75	131	94	98	99	110	104	144
Muskoka	91	72	73	115	116	66	115	85	96	101	103	133	165	94	137
Parry Sound	7	60	58	138	92	52	82	110	39	38	65	102	29	131	99
Algoma	9	63	61	107	116	65	87	14	23	149	69	92	129	87	124
Group	18	64	62	122	109	59	96	71	75	89	85	113	134	100	122
The Province	88	90	89	100	106	53	123	90	113	97	97	80	112	91	119

RATIOS OF AVERAGE PRODUCE.

TABLE No. XXIII.—Showing by County Municipalities and groups of Counties the per cent. ratios of average yields per acre in 1886 to average yields per acre for the five years 1882-6.

Counties.	Fall Wheat.	Spring Wheat.	Fall and Stig Wheat.	Barley.	Oats.	Rye.	Pease.	Corn.	Buckwheat.	Beans.	Hay and Clover.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.
Essex	109	92	109	102	110	100	96	98	101	93	92	77	114	88	104
Kent	105	107	104	106	104	80	106	95	87	107	83	82	125	107	93
Elgin	111	91	109	106	106	102	109	102	90	113	91	111	130	146	117
Norfolk	81	80	81	86	90	91	102	103	100	93	97	73	117	108	111
Haldimand	87	83	87	105	95	92	113	115	107	69	100	104	96	96	98
Welland	115	92	113	88	102	117	106	114	96	121	90	89	161	158	117
Group	101	94	101	100	103	94	108	99	98	107	92	87	123	114	112
Lambton	100	90	98	115	101	107	114	106	61	94	79	91	124	119	123
Huron	105	89	103	99	96	165	106	116	91	108	91	72	113	94	126
Bruce	105	108	104	97	97	94	101	119	104	73	90	70	105	95	114
Group	104	96	103	101	98	128	104	108	83	95	88	75	113	97	120
Grey	94	100	97	95	96	117	103	108	107	135	84	81	97	97	110
Simcoe	76	119	91	102	105	81	103	101	96	124	90	88	124	108	111
Group	82	110	94	98	100	85	103	103	100	132	87	85	114	102	110
Middlesex	105	85	100	109	98	109	116	94	98	99	87	102	120	114	120
Oxford	104	81	98	100	98	137	106	102	103	84	93	98	106	100	120
Brant	83	87	83	90	87	103	100	99	102	113	85	98	93	99	102
Perth	100	87	100	101	99	123	116	99	85	113	82	84	121	111	141
Wellington	103	99	102	98	97	103	108	98	101	101	89	92	104	86	126
Waterloo	90	89	91	92	88	99	100	111	100	96	96	72	91	103	120
Dufferin	99	113	106	103	103	137	117	96	98	104	71	81	131	111	114
Group	99	94	98	98	96	120	109	98	98	101	87	90	111	104	123
Lincoln	93	82	93	84	87	109	102	99	84	105	102	109	107	106	115
Wentworth	75	84	76	84	87	87	103	88	89	144	73	83	120	111	118
Halton	76	89	77	84	86	91	99	68	100	104	82	74	101	104	104
Peel	79	87	82	87	87	98	100	100	103	73	99	89	87	80	101
York	88	104	93	100	97	99	104	96	92	110	86	106	91	88	110
Ontario	94	118	112	108	108	79	112	108	126	129	95	104	100	102	117
Durham	107	100	101	103	101	98	112	105	102	93	100	105	94	101	95
Northumberland	110	101	106	92	93	102	112	97	102	142	106	82	91	103	110
Prince Edward	136	107	111	95	103	98	100	105	95	80	105	102	195	145	183
Group	85	105	94	98	96	95	106	99	98	100	94	96	98	96	110
Lennox and Addington	110	98	100	99	94	105	105	112	87	84	113	93	93	103	111
Frontenac	100	96	95	96	92	91	96	93	91	97	90	123	99	103	108
Leeds and Grenville	110	99	100	101	96	89	102	115	97	131	88	94	92	94	90
Dundas	124	108	111	96	103	87	104	103	105	107	98	66	90	83	115
Stormont	110	98	99	96	107	115	97	114	125	75	97	84	82	114	146
Glengarry	94	109	109	100	90	85	100	165	82	99	104	71	93	82	131
Prescott	164	132	132	129	118	105	133	115	113	81	104	106	140	145	119
Russell	136	110	110	96	99	....	87	140	125	64	160	70	91	90	106
Carleton	131	99	100	96	86	104	95	77	110	95	107	77	91	83	108
Renfrew	100	95	95	102	96	102	92	125	118	120	114	99	117	110	108
Lanark	101	94	94	93	89	84	87	101	92	113	101	81	96	81	96
Group	110	101	102	99	95	99	98	109	101	98	100	89	94	90	108
Victoria	113	107	110	98	104	86	107	137	88	105	91	100	99	111	130
Peterborough	117	117	117	96	97	101	102	120	102	150	107	105	103	103	107
Haliburton	103	134	132	97	120	84	108	101	154	120	88	127	106	150	158
Hastings	130	96	107	102	102	101	118	110	100	113	83	115	112	102	127
Group	119	108	112	99	102	100	109	111	103	124	91	110	103	108	125
Muskoka	86	97	97	95	97	89	109	111	119	142	87	134	104	86	113
Parry Sound	108	92	92	101	104	104	94	103	84	86	69	113	117	163	116
Algoma	77	81	81	89	95	86	76	106	64	99	68	91	102	94	90
Group	75	85	85	95	98	94	90	106	111	124	78	118	107	100	107
The Province	97	102	99	99	98	96	105	102	99	105	94	91	106	99	116

ACREAGE UNDER CROP.

TABLE No. XXIV.—Showing by County Municipalities and groups of Counties the total area under crop (including Wheat, Barley, Oats, Rye, Pease, Corn, Buckwheat, Beans, Potatoes, Mangels, Carrots, Turnips, and Hay and Clover) in Ontario, in the years 1882, 1883, 1884, 1885 and 1886, with the yearly average for the five years; also the percentages of cleared land under crop in 1885 and 1886, and the average of the five years 1882-6.

Counties.	Acres under Crop.						Per cent. of cleared land under crop.		
	1886.	1885.	1884.	1883.	1882.	1882-6.	1886.	1885.	1882-6
Essex	142,539	142,489	139,909	133,467	125,235	136,728	77.5	78.2	78.5
Kent	213,327	214,348	203,471	203,778	173,351	201,655	78.0	78.4	76.5
Elgin	163,126	164,044	158,221	167,957	163,117	163,293	62.3	64.1	64.6
Norfolk	149,639	150,016	151,136	159,717	145,072	151,116	67.0	67.4	69.2
Haldimand	144,177	138,240	137,315	143,981	135,399	139,822	72.8	70.4	72.8
Welland	107,818	110,258	109,451	109,937	109,608	109,414	69.1	71.1	71.1
Totals	920,626	919,395	899,503	918,837	851,782	902,028	71.0	71.5	71.9
Lambton	168,404	170,240	171,253	159,725	152,787	164,482	66.8	69.6	68.5
Huron	328,396	327,741	320,819	349,297	306,927	326,636	62.9	63.5	65.4
Bruce	275,320	264,737	251,250	281,104	250,859	264,654	65.2	65.4	67.0
Totals	772,120	762,718	743,322	790,126	710,573	755,772	64.5	65.5	66.6
Grey	350,694	350,267	340,838	368,928	353,270	352,800	67.2	66.6	67.8
Simcoe	296,462	296,446	291,006	300,804	283,794	293,702	67.5	69.6	68.8
Totals	647,156	646,713	631,844	669,732	637,064	646,502	67.4	67.9	68.2
Middlesex	298,447	305,922	285,139	309,525	307,698	301,346	59.6	61.2	61.6
Oxford	210,386	215,493	208,492	223,829	210,651	213,770	62.9	64.6	64.8
Brant	118,973	118,694	117,442	124,662	120,649	120,084	70.8	70.3	72.0
Perth	227,250	231,255	229,397	245,449	221,700	231,010	64.9	65.9	67.6
Wellington	289,422	289,973	281,689	295,770	277,936	286,958	67.7	69.2	69.8
Waterloo	162,489	163,017	157,933	169,354	159,544	162,468	70.0	70.6	71.2
Dufferin	119,102	123,393	116,059	123,174	116,495	119,645	67.1	71.5	70.7
Totals	1,426,069	1,447,747	1,396,151	1,491,763	1,414,673	1,435,281	65.1	66.6	67.2
Lincoln	102,793	100,938	103,746	105,206	96,175	101,772	68.9	68.1	70.1
Wentworth	143,029	139,371	140,809	147,147	141,255	142,322	70.5	67.5	69.5
Halton	105,898	105,984	105,512	111,294	105,162	106,770	63.8	63.0	64.4
Peel	157,939	157,563	155,536	161,615	152,674	157,065	68.4	68.6	69.9
York	291,799	296,885	287,868	295,127	296,330	293,602	72.3	73.4	73.6
Ontario	241,869	236,760	234,996	247,930	241,114	240,534	73.8	72.1	74.1
Durham	203,971	199,060	205,747	212,057	204,779	205,123	75.4	74.8	76.2
Northumberland	217,006	212,299	215,769	226,222	198,339	213,927	70.2	69.9	71.5
Prince Edward	133,203	128,686	127,538	133,993	120,278	128,739	73.6	72.6	74.1
Totals	1,597,507	1,577,546	1,577,521	1,640,591	1,556,106	1,589,854	71.3	70.7	72.0
Lennox and Addington	142,074	136,608	134,693	141,257	141,610	139,248	71.0	67.6	70.4
Frontenac	136,155	138,324	136,316	142,096	149,848	140,548	68.5	67.0	70.7
Leeds & Grenville	241,882	226,582	229,244	239,339	229,283	233,266	60.1	57.7	59.6
Dundas	85,531	86,351	81,367	87,955	80,069	84,255	63.7	64.5	66.5
Stormont	72,935	71,875	71,596	68,837	73,702	71,789	65.1	63.7	65.5
Glengarry	85,671	85,337	81,262	82,925	88,951	84,829	63.1	62.4	63.6
Prescott	84,285	85,516	79,367	82,520	74,791	81,296	67.7	70.8	69.8
Russell	49,947	51,702	54,020	53,865	37,828	49,472	67.3	69.5	70.0
Carleton	185,333	176,762	176,350	173,569	180,410	178,485	71.1	68.0	69.9
Renfrew	163,814	161,375	158,497	165,129	142,634	158,290	68.3	69.4	69.4
Lanark	148,463	147,594	138,210	138,625	135,284	141,635	53.0	53.1	52.2
Totals	1,396,090	1,368,026	1,340,922	1,376,117	1,334,410	1,363,113	64.5	63.6	64.9
Victoria	172,710	171,278	164,639	172,418	167,791	169,767	74.3	73.2	74.8
Peterborough	144,273	148,936	135,933	139,325	130,298	139,753	68.2	68.2	67.9
Haliburton	19,869	18,798	17,452	19,013	19,922	19,011	78.7	73.9	76.8
Hastings	225,397	206,168	216,756	237,707	238,875	224,981	71.0	65.7	71.0
Totals	562,249	545,180	534,780	568,463	556 886	553,512	71.5	68.9	71.5
Muskoka	39,849	37,223	35,850	36,610	25,238	34,954	78.9	74.9	79.2
Parry Sound	17,094	21,375	21,571	23,330	12,913	19,257	79.8	80.1	81.0
Algoma	24,521	24,520	22,494	27,054	25,578	24,833	78.9	89.4	96.0
Totals	81,464	83,118	79,915	86,994	63,729	79,044	79.1	80.1	84.3
The Province	7,403,281	7,350,443	7,203,958	7,542,623	7,125,223	7,325,106	67.7	67.7	68.8

RATIOS OF AREAS UNDER CROPS.

TABLE No. XXV.—Showing by County Municipalities and groups of Counties the number of acres under the various crops in Ontario in 1886 per 1,000 acres of cleared land.

Counties.	Fall Wheat.	Spring Wheat.	Barley.	Oats.	Rye.	Peas.	Corn.	Buckwheat.	Beans.	Hay and Clover.	Potatoes.	Mangel wurzels.	Carrots.	Turnips.	Total.
Essex	174.7	9.5	15.7	156.9	3.6	23.9	170.2	3.6	2.6	197.3	14.5	1.2	.5	.8	775.0
Kent	232.3	12.6	18.1	119.2	2.0	47.1	97.0	3.2	44.1	189.5	12.0	.9	.6	1.0	779.6
Elgin	161.9	12.8	15.4	116.1	3.7	60.2	50.3	5.7	3.4	181.7	9.3	1.0	.4	.9	622.8
Norfolk	155.7	4.7	26.0	108.3	26.7	75.0	58.8	21.7	1.6	173.4	12.4	1.1	.5	3.7	669.6
Haldimand	174.9	14.6	72.5	107.3	1.4	90.3	5.7	4.8	.2	249.2	6.1	.6	.5	.4	728.5
Welland	145.9	9.8	22.4	109.9	3.2	26.1	32.0	12.7	3.1	312.3	11.5	.7	.3	1.0	690.9
Group	177.6	10.8	27.4	119.1	6.9	55.3	69.6	8.3	11.0	210.2	11.0	.9	.5	1.3	709.9
Lambton	127.9	36.6	48.4	147.2	.2	49.0	22.8	1.2	1.4	220.7	9.8	1.2	.6	.9	667.9
Huron	133.0	41.6	41.6	140.4	.5	65.5	1.9	1.0	.3	179.4	9.0	3.0	.9	11.0	629.1
Bruce	110.6	37.6	46.8	139.7	.7	94.4	1.0	1.5	.4	194.7	10.6	.8	.6	12.5	651.9
Group	124.0	39.2	44.9	141.6	.5	72.2	6.0	1.2	.6	193.5	9.7	1.8	.7	9.4	645.3
Grey	43.5	73.5	48.4	167.1	.3	89.3	.7	.9	.2	218.6	12.2	.7	1.0	16.0	672.4
Simcoe	99.1	82.2	65.4	154.9	2.5	78.0	1.7	1.2	.2	163.9	14.4	1.5	1.3	8.8	675.1
Group	69.0	77.5	56.2	161.5	1.3	84.1	1.2	1.0	.2	193.6	13.2	1.0	1.1	12.7	673.6
Middlesex	129.6	37.4	23.5	137.2	.4	51.0	19.4	1.7	.5	177.7	10.4	2.8	.9	3.1	595.6
Oxford	105.2	41.2	40.7	153.2	1.8	55.2	21.0	1.7	.4	181.8	8.0	3.5	.8	14.9	629.4
Brant	179.6	8.9	108.3	100.9	2.5	59.5	22.8	3.4	1.2	192.1	11.2	2.3	.9	14.4	708.0
Perth	136.4	37.3	37.8	154.6	.4	66.0	1.3	.6	.1	188.3	9.1	4.2	1.0	11.7	648.8
Wellington	59.4	45.7	77.5	163.5	.8	89.6	.7	.4	.1	195.9	11.8	2.2	.6	28.6	676.8
Waterloo	172.5	23.8	63.5	147.3	1.4	66.7	3.1	.4	.3	186.0	11.4	1.7	1.4	21.0	700.5
Dufferin	56.3	101.3	73.4	164.1	3.3	58.9	.2	.7	.2	185.7	14.1	.5	.7	11.3	670.7
Group	115.7	41.1	53.7	148.0	1.2	64.5	10.1	1.2	.3	186.2	10.6	2.7	.9	14.7	650.9
Lincoln	154.8	14.6	21.1	109.1	2.0	34.9	35.3	4.5	.8	296.3	11.7	1.6	.6	1.4	688.7
Wentworth	159.7	14.0	63.5	136.9	1.2	54.8	15.4	3.7	.3	226.2	14.9	1.5	.7	11.8	704.6
Halton	123.0	19.4	84.0	109.3	1.3	64.8	4.9	.9	.5	206.6	8.4	2.9	1.0	11.0	638.0
Peel	124.7	46.7	145.7	117.6	1.8	59.4	1.6	.2	.2	167.7	10.3	1.7	1.2	5.5	684.3
York	73.7	61.3	143.3	154.7	1.5	73.5	2.2	.8	.2	182.7	15.8	4.7	1.4	7.0	722.8
Ontario	15.3	140.8	115.6	149.9	4.6	90.8	6.1	1.5	.4	163.3	10.5	2.1	1.6	35.5	738.0
Durham	10.9	116.5	193.3	126.4	13.8	80.5	4.7	5.1	.9	165.8	10.7	1.6	1.5	22.0	753.7
Northumberland	29.7	81.4	156.4	101.4	22.6	67.4	9.7	24.9	1.1	182.4	12.0	1.6	.8	11.0	702.4
Prince Edward	6.7	32.5	192.0	85.5	43.5	97.3	14.9	43.4	4.6	198.9	15.0	.8	.2	.6	735.9
Group	68.2	68.0	131.5	125.8	9.8	71.6	8.7	8.7	.8	190.8	12.3	2.3	1.1	13.2	712.8
Len. & Add'ton.	8.0	29.6	189.1	119.6	18.0	49.1	6.9	22.7	1.1	249.0	15.4	.7	.3	.5	710.0
Frontenac	4.5	41.5	67.6	140.7	3.7	63.5	5.9	8.6	2.0	324.6	17.6	1.4	1.1	2.8	685.5
Leeds & Grenv'l.	8.6	36.4	25.5	167.5	5.7	14.9	8.6	12.6	.8	302.9	15.9	.4	.4	.5	600.7
Dundas	2.3	44.2	38.1	233.3	7.0	10.4	9.9	10.6	1.4	259.8	17.3	1.6	.4	.3	636.6
Stormont	2.8	48.0	15.1	226.7	1.8	23.0	6.7	17.0	.7	289.8	18.3	.4	.1	.8	651.2
Glengarry	1.6	65.8	15.1	227.7	.2	45.7	2.3	5.1	.7	247.5	18.0	.3	.3	.5	630.8
Prescott	.0	73.3	21.7	217.1	2.2	62.3	10.7	12.1	2.8	252.7	20.2	.2	.4	1.1	676.8
Russell	.2	60.3	18.1	270.6	.0	50.0	3.2	16.5	2.1	225.7	20.7	1.1	1.3	2.9	672.7
Carleton	.5	81.1	35.8	243.4	11.7	53.7	3.9	15.0	1.6	231.7	22.4	2.2	2.0	5.9	710.9
Renfrew	1.1	102.9	5.7	178.2	20.5	96.2	1.1	5.4	1.7	249.7	16.8	.5	.4	2.6	682.8
Lanark	7.2	51.3	9.9	144.4	7.6	44.5	3.3	20.3	.4	226.0	12.3	.4	.5	2.1	530.2
Group	4.3	56.8	40.6	185.3	8.4	46.1	5.6	13.4	1.3	263.1	17.2	.8	.7	1.9	645.5
Victoria	41.1	119.2	146.8	164.3	3.3	73.0	1.0	1.6	.2	164.2	11.6	2.1	1.2	13.4	743.0
Peterborough	45.4	119.1	73.3	143.8	14.5	80.6	.8	4.0	.4	180.1	11.7	1.1	1.3	5.9	682.0
Haliburton	2.9	42.1	9.7	197.4	5.9	61.6	2.9	7.3	.6	422.8	21.5	.7	1.0	11.1	787.5
Hastings	20.8	46.4	125.7	142.1	30.9	64.5	11.2	15.5	.8	231.2	17.1	.8	.4	2.9	710.3
Group	32.8	87.3	114.1	150.9	17.5	71.3	5.1	8.0	.5	203.8	14.2	1.3	.9	7.1	714.8
Muskoka	1.1	22.6	13.2	182.7	6.8	54.4	3.2	4.8	.5	449.4	25.1	1.1	1.5	21.6	789.0
Parry Sound	.1	56.1	47.9	175.2	11.3	52.9	1.6	3.0	.3	395.2	27.7	.1	.9	25.2	797.5
Algoma	1.1	178.0	22.9	133.4	2.5	116.0	.2	.5	.3	288.7	21.4	.9	.8	22.0	788.7
Group	.9	76.9	23.3	166.3	6.5	72.7	2.0	3.1	.4	389.6	24.5	.8	1.2	22.5	790.7
The Province (1886.	81.0	52.8	67.3	148.3	6.2	64 4	14.3	6.5	1.9	209.8	12.8	1.7	.8	9.0	676.8
The Province (1885.	80.6	73.6	55.1	142.2	7.2	59.5	15.5	5.7	2.3	208.9	14.7	1.5	.8	9.4	677.0

RATIOS OF AREAS UNDER CROP.

TABLE No. XXVI.—Showing by County Municipalities and groups of Counties the average number of acres under various crops per 1,000 acres of cleared land in Ontario, for the five years 1882-6.

Counties.	Fall Wheat.	Spring Wheat.	Barley.	Oats.	Rye.	Pease.	Corn.	Buckwheat.	Beans.	Hay and Clover.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Totals.
Essex	189.0	10.8	12.9	152.7	4.6	20.1	171.0	3.8	2.7	198.5	16.5	1.1	.4	1.2	785.3
Kent	234.4	10.4	21.4	118.1	1.9	28.5	98.6	3.3	41.1	190.3	13.8	1.0	.5	1.4	764.7
Elgin	179.1	9.3	17.5	122.4	4.7	39.9	58.5	5.1	4.4	191.1	11.7	1.0	.5	1.3	646.5
Norfolk	153.2	4.6	27.4	117.4	32.2	56.5	65.3	22.8	4.7	186.7	17.1	.8	.5	3.0	692.2
Haldimand	172.7	16.0	78.8	108.6	5.7	64.6	10.7	3.8	.9	256.3	8.4	.6	.4	.4	727.9
Welland	150.5	13.5	27.3	117.5	4.6	23.4	44.1	11.6	6.0	294.3	16.4	.8	.4	1.0	711.4
Group	183.1	10.5	30.0	122.2	9.0	39.4	74.6	8.2	11.6	213.8	13.8	.9	.5	1.4	719.0
Lambton	140.8	33.8	60.3	150.7	.9	31.1	30.7	1.8	1.6	216.6	13.0	1.4	.7	1.2	684.6
Huron	144.9	50.1	50.5	138.7	.6	57.3	3.7	.6	.2	179.4	10.5	2.7	1.1	13.3	653.6
Bruce	134.7	40.0	46.2	134.8	1.0	88.8	1.0	.8	.3	194.2	12.4	1.1	.8	13.6	669.7
Group	140.4	43.2	51.1	139.9	.8	62.7	8.5	.9	.5	192.4	11.7	1.9	.9	10.8	665.7
Grey	57.5	97.3	46.7	147.8	1.1	83.5	.7	.7	.2	210.2	13.8	.7	1.1	16.3	677.6
Simcoe	130.3	86.8	63.2	133.9	5.6	70.9	1.7	.7	.3	168.4	16.0	1.6	1.4	7.4	688.2
Group	90.3	92.6	54.1	141.5	3.1	77.8	1.1	.7	.3	191.4	14.8	1.1	1.3	12.3	682.4
Middlesex	156.6	32.5	30.4	135.4	.9	36.8	22.2	1.1	.7	180.2	12.2	2.4	1.0	3.2	615.6
Oxford	120.0	39.8	49.6	146.9	3.5	39.9	26.9	2.1	.9	188.8	10.6	3.0	1.0	15.0	648.0
Brant	193.6	10.4	92.3	104.6	4.9	49.8	28.7	4.3	4.8	196.0	13.6	2.0	1.3	13.3	719.6
Perth	138.4	51.9	52.8	147.6	.6	60.2	2.0	.4	.2	190.6	11.6	4.0	1.3	14.3	675.9
Wellington	72.9	62.5	80.3	150.0	2.1	85.9	1.3	.4	.1	193.7	14.7	2.0	.7	31.2	697.8
Waterloo	180.2	32.4	65.6	141.3	2.6	56.7	7.0	.5	.2	186.6	13.1	1.9	1.4	22.4	711.9
Dufferin	74.5	126.1	62.8	150.3	5.6	63.9	.4	.5	.1	188.9	18.3	.8	1.0	13.5	706.7
Group	130.8	48.2	57.7	141.3	2.3	55.8	12.9	1.1	.8	188.4	13.0	2.5	1.0	15.9	671.7
Lincoln	156.8	18.8	29.3	118.6	4.1	29.0	42.8	5.6	1.1	277.7	13.7	1.5	.7	1.4	701.1
Wentworth	160.4	15.2	56.4	134.0	4.8	45.2	23.0	3.9	.7	220.6	18.2	2.1	1.0	9.7	695.2
Halton	142.0	23.4	73.6	105.3	3.3	59.4	6.3	1.0	.3	206.3	10.2	2.4	.8	9.4	643.7
Peel	129.2	62.6	137.6	116.0	7.9	54.3	1.6	1.1	.3	167.0	12.7	1.8	1.4	5.2	698.7
York	103.3	70.9	130.4	144.3	5.4	64.3	3.3	.8	.4	179.9	19.4	4.3	1.9	6.9	735.5
Ontario	36.9	153.5	107.7	137.4	10.6	75.9	7.4	1.2	1.3	158.7	12.2	2.5	1.7	33.6	740.6
Durham	12.5	161.8	159.5	118.7	21.1	79.1	7.2	3.2	1.4	164.0	11.8	1.6	1.8	18.4	762.1
Northumberland	32.8	107.4	146.2	92.3	40.5	65.4	12.7	14.7	1.9	175.1	14.0	1.5	.8	9.4	714.7
Prince Edward	14.7	45.0	233.6	77.6	56.3	49.5	37.8	33.8	2.7	174.0	14.3	.7	.2	.6	740.8
Group	80.3	84.0	123.8	119.4	16.8	61.3	12.9	6.3	1.1	184.6	14.4	2.3	1.3	12.0	720.5
Lennox & Add'n	11.2	36.7	214.3	105.8	31.2	43.8	11.7	14.0	.8	215.5	17.4	.5	.3	.9	704.1
Frontenac	11.6	45.7	96.2	128.3	22.9	59.2	8.2	7.6	1.7	301.3	20.7	.8	.7	1.8	706.7
L'ds & Grenville	16.1	36.0	29.2	155.7	22.8	16.3	12.0	14.6	.9	272.3	18.9	.5	.4	.5	596.2
Dundas	13.1	37.5	60.1	220.0	14.0	14.1	11.2	11.0	1.4	261.4	19.8	1.0	.3	.5	665.4
Stormont	8.5	39.6	22.9	221.8	5.7	26.0	11.4	20.8	1.2	275.7	19.6	.4	.3	.9	654.8
Glengarry	6.5	59.0	15.3	221.1	.6	50.7	5.8	8.4	.9	247.2	19.4	.4	.3	.2	635.8
Prescott	.9	69.5	18.0	213.4	3.1	94.0	12.1	15.6	4.8	243.5	21.1	.4	.4	.9	697.7
Russell	3.8	62.9	17.7	248.0	4.5	64.2	6.2	14.6	3.7	246.3	22.5	.8	1.5	3.5	700.2
Carleton	8.2	90.2	28.2	215.8	30.2	53.1	4.5	14.7	1.8	218.1	24.3	2.1	2.1	5.3	698.6
Renfrew	6.2	110.9	4.8	162.1	32.8	91.5	2.1	5.2	2.1	255.9	16.7	.5	.5	2.5	693.8
Lanark	13.6	53.2	8.8	123.2	23.2	41.6	4.9	24.6	.8	211.8	13.7	.6	.5	1.5	522.0
Group	10.4	58.4	47.2	170.0	21.1	47.4	8.1	13.9	1.5	249.0	19.0	.8	.7	1.7	649.2
Victoria	43.5	159.8	123.1	152.5	5.9	68.6	1.9	1.7	.5	161.9	12.7	1.9	1.1	12.8	747.9
Peterborough	50.3	131.4	65.7	133.0	18.0	72.7	1.6	3.3	.8	182.6	12.3	1.3	1.6	4.7	679.3
Haliburton	3.3	53.1	11.4	182.0	11.8	61.0	5.4	11.0	.9	386.2	28.4	.3	.7	13.0	768.5
Hastings	26.5	57.6	132.0	126.9	52.7	55.5	17.8	12.1	.8	205.6	19.4	.7	.4	2.0	710 0
Group	37.1	107.0	107.9	137.8	28.4	64.1	8.4	6.7	.7	192.4	15.9	1.2	1.0	6.2	714.8
Muskoka	1.2	36.5	12.5	175.1	10.4	58.9	5.1	7.0	1.0	432.3	29.0	.8	1.6	20.3	791.7
Parry Sound	1.9	78.1	31.4	179.0	20.1	54.3	1.9	6.9	.7	378.3	29.2	.5	1.1	26.6	810.0
Algoma	11.6	274.3	22.8	131.7	3.9	121.1	2.5	2.2	.2	343.2	25.7	.9	1.0	19.2	960.3
Group	4.2	112.6	20.1	164.1	11.1	74.9	3.6	5.7	.7	394.1	28.1	.7	1.3	21.6	842.8
The Province	92.3	61.5	68.4	140.0	11.7	56.8	17.3	5.9	2.2	205.3	14.9	1.6	.9	9.1	687.9

PASTURE AND ORCHARD AND GARDEN.

TABLE No. XXVII.—Showing by County Municipalities and groups of Counties the area of Pasture and Orchard and Garden in Ontario, in the years 1885 and 1886, with the yearly average for the five years 1882-6: also the rate of Orchard and Garden per 1,000 acres cleared for the years 1885 and 1886, with the yearly average for the five years 1882-6.

Counties.	Pasture.			Orchard and Garden.			Rate of Orchard and Garden, 1,000 acres cleared.		
	1886.	1885.	1884-6.	1886.	1885.	1882-5.	1886.	1885.	1882-6
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.			
Essex	64,251	62,457	57,857	5,768	6,015	6,015	31.4	33.0	34.5
Kent	89,037	89,292	82,476	7,305	7,615	7,664	26.7	27.9	29.1
Elgin	79,679	74,624	77,271	6,696	6,881	7,106	25.6	26.9	28.1
Norfolk	47,308	50,528	47,541	7,470	8,024	8,022	33.4	36.1	36.7
Haldimand	43,950	39,206	41,176	4,541	4,528	4,742	22.9	23.1	24.9
Welland	33,681	32,216	32,321	7,248	6,781	6,773	46.4	43.7	44.0
Totals	357,906	348,323	338,642	39,028	39,844	40,322	30.1	31.0	32.1
Lambton	95,926	88,689	91,815	5,961	5,596	5,995	23.6	22.9	25.0
Huron	152,711	140,784	144,924	8,539	8,478	8,453	16.4	16.4	16.9
Bruce	107,344	98,469	100,602	5,446	5,851	5,794	12.9	14.5	14.7
Totals	355,981	327,942	337,341	19,946	19,925	20,242	16.7	17.1	17.8
Grey	145,408	138,009	138,887	6,719	7,105	7,319	12.9	13.5	14.1
Simcoe	84,680	76,948	80,276	4,378	4,450	4,842	10.0	10.4	11.3
Totals	230,088	214,957	219,163	11,097	11,555	12,161	11.6	12.1	12.8
Middlesex	201,599	182,945	187,515	10,100	11,000	10,969	20.2	22.1	22.4
Oxford	104,404	103,255	103,979	8,208	8,666	8,708	24.6	26.0	26.4
Brant	34,683	34,402	34,274	4,488	4,651	4,872	26.7	27.6	29.2
Perth	92,925	89,555	89,505	4,410	4,626	5,062	12.6	13.2	14.8
Wellington	100,363	93,601	95,214	4,643	4,772	5,104	10.9	11.4	12.4
Waterloo	36,393	37,477	36,857	5,221	5,295	5,370	22.5	22.9	23.5
Dufferin	37,589	34,960	37,634	1,234	1,583	1,577	6.9	9.2	9.3
Totals	607,906	576,195	584,978	38,304	40,593	41,662	17.5	18.7	19.5
Lincoln	31,583	30,464	30,226	8,059	8,075	7,975	54.0	54.5	54.9
Wentworth	47,835	43,905	45,373	9,197	9,324	9,105	45.3	45.1	44.5
Halton	39,353	39,215	39,056	4,603	4,991	4,895	27.7	29.7	29.5
Peel	40,323	35,993	36,994	4,452	4,128	4,227	19.3	18.0	18.8
York	70,292	68,306	70,019	8,128	7,744	8,277	20.1	19.1	20.7
Ontario	69,971	68,628	68,845	5,298	5,330	5,462	16.2	16.2	16.8
Durham	53,979	55,059	54,317	3,897	3,825	4,091	14.4	14.4	15.2
Northumberland	72,179	70,475	68,421	6,485	6,683	6,507	21.0	22.0	21.7
Prince Edward	40,072	41,021	38,970	6,503	6,696	6,350	35.9	37.8	36.5
Totals	465,587	453,066	452,221	56,622	56,796	56,889	25.3	25.4	25.8
Lennox & Addington	65,471	67,812	65,665	2,448	2,671	2,846	12.2	13.2	14.4
Frontenac	71,217	74,306	69,140	2,170	1,966	2,358	10.9	9.5	11.9
Leeds & Grenville	174,549	168,109	165,630	3,121	3,062	3,443	7.8	7.8	8.8
Dundas	47,695	43,824	44,493	1,170	1,262	1,259	8.7	9.4	9.9
Stormont	42,724	39,609	40,536	930	920	1,099	8.3	8.2	10.0
Glengarry	48,086	46,675	47,643	470	525	663	3.5	3.8	5.0
Prescott	46,093	42,499	42,073	220	166	267	1.8	1.4	2.0
Russell	28,477	22,793	22,926	121	164	167	1.6	2.2	2.4
Carleton	90,008	82,294	86,536	431	479	670	1.7	1.8	2.6
Renfrew	72,794	69,711	68,309	283	842	761	1.2	3.6	3.3
Lanark	108,900	107,631	107,256	1,011	1,097	1,193	3.6	3.9	4.4
Totals	791,014	765,263	760,207	12,375	13,145	14,726	5.7	6.1	7.0
Victoria	47,718	49,735	48,465	1,729	1,818	2,029	7.4	7.8	8.9
Peterborough	52,550	55,785	51,604	1,861	1,969	2,032	8.8	9.0	9.9
Haliburton	7,060	5,494	5,859	176	37	109	7.0	1.5	4.4
Hastings	93,640	97,240	95,505	4,869	5,014	5,727	15.3	16.0	18.1
Totals	200,968	208,254	201,433	8,635	8,838	9,897	11.0	11.2	12.8
Muskoka	9,187	9,344	8,996	393	349	344	7.8	7.0	7.8
Parry Sound	3,064	3,869	3,755	.....	56	40	.....	2.1	1.7
Algoma	4,620	3,986	4,099	216	165	120	6.9	6.0	4.6
Totals	16,871	17,199	16,850	609	570	504	5.9	5.5	5.4
The Province	3,026,321	2,911,199	2,910,835	186,616	191,266	196,403	17.1	17.6	18.4

Note.—The area of pasture is computed from farmers' schedules, while the area of orchard and garden is taken from the assessors' rolls.

RURAL AREA.

TABLE No. XXVIII.—Showing by County Municipalities and groups of Counties, the Rural Area of Ontario, as returned by Municipal Assessors for 1886.

Counties.	Rural Areas.						
	Areas of Assessed Land.			Acres cleared.	Acres woodland.	Acres swamp, marsh or waste.	Per cent. cleared.
	Resident.	Non-resident.	Total occupied.				
Essex	410,057	20,392	430,449	183,928	227,271	19,250	42.7
Kent	537,281	30,728	568,009	273,622	255,795	38,592	48.2
Elgin	434,787	4,349	439,136	261,904	160,418	16,814	59.6
Norfolk	388,932	9,530	398,462	223,485	151,093	23,884	56.1
Haldimand	280,823	114	280,937	197,922	72,285	10,730	70.5
Welland	220,175	7,889	228,064	156,051	57,614	14,399	68.4
Totals	2,272,055	73,002	2,345,057	1,296,912	924,476	123,669	55.3
Lambton	612,856	46,542	659,398	252,130	390,574	16,694	38.2
Huron	781,208	17,320	798,528	522,029	186,812	89,687	65.4
Bruce	767,987	49,537	817,524	422,310	316,743	78,471	51.7
Totals	2,162,051	113,399	2,275,450	1,196,469	894,129	184,852	52.6
Grey	1,019,687	43,584	1,063,271	521,543	397,099	144,629	49.1
Simcoe	880,991	70,577	951,568	439,166	457,685	54,717	46.2
Totals	1,900,678	114,161	2,014,839	960,709	854,784	199,346	47.7
Middlesex	749,676	9,128	758,804	501,113	236,355	21,336	66.0
Oxford	470,709	1,300	472,009	334,243	109,256	28,510	70.8
Brant	213,297	2,409	215,706	168,045	27,780	19,881	77.9
Perth	515,095	2,730	517,825	350,260	127,248	40,317	67.6
Wellington	619,780	7,592	627,372	427,635	99,403	100,334	68.2
Waterloo	304,607	2,105	306,712	231,950	58,232	16,530	75.6
Dufferin	333,479	21,890	355,369	177,591	97,092	80,686	50.0
Totals	3,206,643	47,154	3,253,797	2,190,837	755,366	307,594	67.3
Lincoln	188,403	2,175	190,578	149,246	36,279	5,053	78.3
Wentworth	271,146	925	272,071	202,983	47,822	21,266	74.6
Halton	221,690	1,150	222,840	165,964	45,185	11,691	74.5
Peel	288,075	262	288,337	230,808	45,614	11,915	80.0
York	529,097	10,300	539,397	403,668	92,255	43,474	74.8
Ontario	478,963	21,685	500,648	327,754	105,132	67,762	65.5
Durham	367,483	2,972	370,455	270,619	70,374	29,462	73.0
Northumberland	426,840	5,671	432,511	308,956	98,700	24,855	71.4
Prince Edward	230,001	2,749	232,750	181,019	44,934	6,797	77.8
Totals	3,001,698	47,889	3,049,587	2,241,017	586,295	222,275	73.5
Lennox and Addington	384,989	12,111	397,100	200,094	103,557	93,449	50.4
Frontenac	608,605	58,358	666,963	198,631	364,045	104,287	29.8
Leeds and Grenville	732,199	6,243	738,442	402,626	220,741	115,075	54.5
Dundas	234,852	2,568	237,420	134,351	71,654	31,415	56.6
Stormont	240,217	7,869	248,086	112,006	125,180	10,900	45.1
Glengarry	288,570	390	288,960	135,818	127,086	26,056	47.0
Prescott	269,532	13,947	283,479	124,545	121,553	37,381	43.9
Russell	226,686	23,641	250,327	74,244	173,302	2,781	29.7
Carleton	548,261	15,268	563,529	260,708	168,992	133,829	46.3
Renfrew	822,872	38,315	861,187	239,914	559,941	61,332	27.9
Lanark	611,049	49,358	660,407	279,999	251,101	129,307	42.4
Totals	4,967,832	228,068	5,195,900	2,162,936	2,287,152	745,812	41.6
Victoria	530,879	32,780	563,659	232,455	222,193	109,011	41.2
Peterborough	492,658	37,021	529,679	211,556	253,175	64,948	39.9
Haliburton	534,331	25,673	560,004	25,230	504,058	30,716	4.5
Hastings	869,736	73,434	943,170	317,321	566,092	59,757	33.6
Totals	2,427,604	168,908	2,596,512	786,562	1,545,518	264,432	30.3
Muskoka	454,197	55,338	509,535	50,507	389,305	69,723	9.9
Parry Sound	234,861	12,945	247,806	21,433	219,562	6,811	8.6
Algoma	233,933	36,379	270,312	31,089	220,099	19,124	11.5
Totals	922,991	104,662	1,027,653	103,029	828,966	95,658	10.0
The Province 1886	20,861,552	897,243	21,758,795	10,938,471	8,676,686	2,143,638	50.3
The Province 1885	20,671,554	1,103,745	21,775,299	10,856,283	8,883,004	2,036,012	49.9

PART II.

LIVE STOCK, THE DAIRY AND THE APIARY.

LIVE STOCK.

Live stock of all kinds passed very well through the winter of 1885-86, and emerged in the spring in excellent condition. Fodder was abundant in almost every part of the province, last spring presenting a marked contrast in that respect with the spring of 1885. Here and there, from local causes, such as drouth, grasshoppers, and failure to secure hay in good condition, fodder was a little scarce, but the exceptions were scarcely worth noticing. Hay sold at moderate rates all through the winter and spring, prices ranging from $6 to $10 per ton in different localities, and in only a few places going beyond the latter price. From some districts, indeed,—chiefly along Lake Erie,—supplies were sent to American markets. Coarse grains were equally abundant and cheap, most farmers feeding a much greater quantity than usual to their stock.

Owing to this abundance of feed and the shortness of the winter, animals of all kinds were in exceptionally good condition at the commencement of last season. The early part of the season was also very favorable to the starting of pastures, except in a few localities where late frosts, followed by cool, dry weather instead of warm spring rains, almost ruined the grasses. In general, vegetation last spring was unusually rapid and luxuriant, and live stock fared well accordingly. It was fortunate that these conditions were present in the spring, as in a large portion of the province stock, and more especially cattle, needed all their gathered store of strength and flesh to carry them through the later summer. In almost all the western counties, and in some of the northern and eastern ones, the drouth played havoc with the pastures, which, by the middle of August, were looking discouragingly brown and bare. Happily, live stock were in condition to withstand this time of adversity, and though they came through it in most cases reduced in flesh, their health and strength were noticeably unimpaired. They were thus in a good position to improve rapidly when the rains of the latter part of August gave the pastures a fresh start, and were kept in good condition till the end of the season. Pastures were also green to a later date than usual. In the St. Lawrence and Ottawa counties the pastures were very good throughout the summer, rain having visited this district frequently. Portions of the counties bordering on the lakes were likewise favored, but not to so great an extent.

When the August returns were sent in to the Bureau the drouth was at its height, and its effect on live stock in most of the counties was severely felt, though there were no disastrous results. In the Lake Erie counties, where the drouth was extremely severe, cattle became very thin in flesh and milch cows declined so rapidly in their yield that there was a noticeable shrinkage in dairy products. In the Lake Huron counties the pastures were, on the whole, somewhat better preserved, but here, too, there was a very large percentage of the fields left bare and brown, and stock—especially milch cows—

fared badly in consequence. In some portions of all three counties the pastures were reported as good and dairy produce abundant, but these exceptions were few. From the Georgian Bay and West Midland counties came the same story of dried-up pastures, fairly good-looking horses, cattle, sheep and pigs, and a general shrinkage in the butter and cheese product; yet in almost every locality this visitation found live stock well fortified to meet what would otherwise have meant something very like disaster to many farmers. Indeed it should be a long time before the farmers of western Ontario forget that it was the liberal feeding of the winter of 1885–6 that carried their live stock safely over the terrible drouth of the summer. From the Lake Ontario counties slightly better reports were received, especially from Northumberland, where stock thrived very fairly. In the East Midland counties and northern districts the season was, on the whole, favorable. Algoma was an exception, as the drouth there was severe, and some damage also was caused by grasshoppers. Moving eastward to the River counties, the aspect was entirely changed. There the rains were copious throughout the summer and the pastures remained in good condition. In a few localities sheep suffered somewhat from continued rains on pasture that was in ordinary seasons inclined to be soft and watery. The St. Lawrence counties have long been noted for the quantity and quality of their dairy product, and last season enabled them to better their record, though prices were discouraging through the early summer.

Horses, sheep and pigs came through the time of drouth much better than cattle, for, as is well known, the shorter grass is more suited to their wants. With their good start in spring, and with continued health and strength, they were generally able to hold their own through even the driest part of the season.

The November reports indicated a great improvement in the situation over August, and represented the condition of live stock throughout the Province as very encouraging. Cattle, sheep and hogs were, as a rule, in high condition for commencing the winter, and about the only danger was that farmers would be induced by the prevalence of low prices to keep over more of their stock than they had proper feed for. The abundance of fattening supplies (coarse grain and roots) and the comparative scarcity of wintering material (hay and straw) indicated, as the best course, the rapid fattening of stock and their prompt sale, rather than holding over the winter on the chance of higher prices in the spring. In almost every part of the Province the pastures were revived by plentiful rains late in August and throughout September, giving live stock of all kinds a splendid opportunity to "pick up" after the unfavorable summer. As a consequence of this, cattle fattened rapidly, and many were sold to dealers "off the grass." The low prices current were not encouraging, however, and in most of the counties cattle were held for stall feeding, while sheep were more generally marketed in the fall. The fall was extremely favorable for dairying purposes, and prices for cheese and butter improved very much over those of summer, the cheese market especially becoming strong and active. The year appears to have been a good one for sheep, especially in the west, where pastures became too short for other stock, but the low price of wool has had the effect of seriously checking sheep breeding in many localities.

There was generally a very encouraging immunity from disease throughout the year. In Essex there were visitations of hog cholera, but the disease was promptly stamped out. In a few of the surrounding counties cases were reported in spring, but all traces disappeared before the season was well opened. Horses were afflicted in some localities with glanders in the spring, but the disease was not wide-spread. Two townships in Renfrew suffered most from its effects. Epizootic was epidemic in some of the western counties in the spring, but not with serious results. Cattle and sheep seem to have been practically free from disease throughout the season.

Statistics of Live Stock.—The statistics of live stock, like those of crops, are compiled from returns made by the farmers of the Province on the June schedules. Horses are given under three classes—working horses, breeding mares and unbroken

horses. The following table shows the number of each class by county groups for 1886, and also the totals for each of the five years 1882–6 :

Districts.		Working Horses.	Breeding Mares.	Unbroken Horses.	Totals.				
					1886.	1885.	1884.	1883.	1882.
Lake Erie		40,888	14,261	22,800	77,949	75,408	74,116	75,924	67,111
Lake Huron		29,327	12,160	18,392	59,879	58,189	56,414	58,424	50,126
Georgian Bay		24,616	9,232	12,980	46,828	46,054	43,316	45,877	42,479
West Midland		59,683	21,628	30,143	111,454	111,271	106,324	111,614	101,913
Lake Ontario		66,553	23,598	36,053	126,204	122,078	117,985	120,945	109,265
St. Law. & Ottawa.		56,034	19,036	30,158	105,228	102,938	96,889	103,868	93,028
East Midland		21,438	6,191	10,437	38,066	39,048	37,412	39,763	37,003
Northern Districts		2,143	894	1,004	4,041	3,823	3,497	3,718	2,679
The Province	1886	300,682	107,000	161,967	569,649				
	1885	311,587	95,963	151,259		558,809			
	1884	303,474	93,910	138,569			535,953		
	1883	349,552	87,380	123,201				560,133	
	1882	336,932	70,596	96,076					503,604

In the first and second years the schedule did not call for a separation of breeding mares from working horses in sufficiently explicit terms, and in many of the returns (as stated in last year's report) it is almost certain that breeding mares were entered under both heads ; the number of working horses in 1882 and 1883 must therefore be taken subject to some allowance. The number of breeding mares and unbroken horses, however, indicate a steady increase each year.

The numbers of horned cattle are presented in the following table by groups of counties, (1) in their several classes for 1886, and (2) in totals for each of the five years 1882–6 :

Districts.		Working Oxen.	Milch Cows.	Store Cattle over two years.	Young and other Cattle.	Totals.				
						1886.	1885.	1884.	1883.	1882.
Lake Erie		1,894	84,373	48,354	104,562	239,183	230,142	222,016	213,059	187,215
Lake Huron		1,312	73,276	61,741	114,302	250,631	244,300	246,755	232,347	190,908
Georgian Bay		2,572	54,566	43,016	78,142	178,296	179,073	176,464	164,261	140,062
West Midland		1,104	151,795	104,003	191,027	447,929	438,807	431,885	407,749	364,304
Lake Ontario		1,513	122,170	65,012	138,056	326,751	316,302	303,675	284,213	250,841
St. Law. & Ott.		1,290	195,823	66,358	148,705	412,176	401,086	384,215	371,582	323,390
East Midland		2,607	57,251	25,073	53,060	137,991	139,968	135,047	131,454	115,382
Nor. Districts		2,122	7,643	4,522	10,929	25,216	26,832	25,613	23,948	14,210
The Province.	1886	14,414	746,897	418,079	838,783	2,018,173				
	1885	15,302	750,005	373,856	837,317		1,976,480			
	1884	16,793	710,519	384,453	813,905			1,925,670		
	1883	17,071	690,437	321,471	799,634				1,828,613	
	1882	14,566	669,629	272,208	629,909					1,586,312

The large increase which the figures show between 1882 and 1883 is doubtless more apparent than real, the low number of the former year being due to a generally prevailing

fear that the enumeration was in some way associated with a design to levy taxes. Since 1883 a fair rate of increase has been maintained, being ten per cent. in the three years, 1883–6. The total increase of that period has been 189,560, of which 97,057 belong to the first year, 50,810 to the second and 41,693 to the third. The number of milch cows, which rose from 690,437 in 1883 to 750,005 in 1885, fell to 746,897 last year. This decrease was probably owing to the depressed state of the dairy industry in the previous season; but the increase of 44,223 in the number of store cattle is not so easily accounted for, except upon the supposition that farmers adopted for the nonce the Malthusian theory in the management of their herds, and transferred a proportion of dairy cows to the class of store cattle! As indicating the chief object for which cattle are bred by farmers in the various districts of the Province, it appears from the statistics that in the Lake Erie counties 35 per cent. of the whole are milch cows and 20 per cent. store cattle; in the Lake Huron counties, 29 per cent. and 24 per cent.; in the Georgian Bay counties, 30 per cent. and 24 per cent.; in the West Midland counties, 34 per cent. and 23 per cent.; in the Lake Ontario counties, 38 per cent. and 20 per cent.; in the St. Lawrence and Ottawa counties, 47 per cent. and 16 per cent., and in the East Midland counties, 41 per cent. and 18 per cent., respectively. From this statement it is obvious that in the eastern half of the Province dairy production largely exceeds meat production, while in the western half the two interests are more nearly balanced—the proportion in the former being as 43 to 19, and in the latter as 33 to 23. The number of store cattle has increased rapidly, having risen from 272,208 in 1882 to 418,079 in 1886. Between 1884 and 1885, however, there was a decrease of upwards of 10,000, in sympathy, no doubt with the drop in prices, and the increase noticeable in the last year has been referred to in connection with the falling off in the number of milch cows. The day of the working ox is apparently well nigh over.

The statistics of sheep are presented in the following table, classified as coarse-woolled and fine woolled, by county groups for 1886, and giving the totals of both classes for the five years 1882-6:

Districts.	Coarse-woolled.		Fine-woolled.		Totals.				
	Over 1 year.	Under 1 year.	Over 1 year.	Under 1 year.	1886.	1885.	1884.	1883.	1882.
Lake Erie..	75,357	50,206	26,196	19,479	171,238	186,718	205,532	202,382	208,071
Lake Huron	97,295	64,088	17,428	12,965	191,776	210,183	238,994	234,489	236,883
Georgian B.	96,244	57,565	21,391	14,205	189,405	207,313	213,484	192,890	188,470
W. Midland.	142,239	92,979	38,472	26,459	300,149	343,009	373,798	384,839	415,062
Lake Ont...	121,845	71,503	41,553	28,670	263,571	277,975	297,483	295,004	313,077
St. L. & O..	192,375	104,176	47,064	26,236	369,851	387,685	421,472	424,017	422,973
E. Midland.	56,657	30,875	11,171	6,961	105,664	123,618	122,102	119,432	121,465
N. Districts.	8,640	5,578	3,096	1,981	19,295	19,104	17,868	15,731	9,302
The Province. 1886	790,652	476,970	206,371	136,956	1,610,949	....	.....	.....	.....
1885	908,762	547,952	176,248	122,643	.....	1,755,605	.....	.....	....
1884	994,608	595,996	176,341	123,788	....	.....	1,890,733	.....	. .....
1883	1,043,080	580,095	150,281	95,328	.....	. .....	.. ..	1,868,784	.....
1882	933,143	676,362	178,299	127,499	.....	.....	.....	.....	1,915,303

The totals are decreasing from year to year by rapid strides, but the decrease is confined to the coarse-woolled breeds. Last year there were 189,092 less of the latter than in 1885; but as in the same period the fine-woolled breeds increased by 44,436, the actual total decrease was only 144,656. From 1883 to 1886 the coarse-woolled sheep fell off by 355,553, whereas the fine-woolled added 97,718 to their number. The low prices of meat and wool products are no doubt the prevailing cause. For the five years 1876-80 the average annual export of wool from the Dominion was 2,892,475 pounds, the declared

value of which was $790,542, or 27½ cts. per pound: whereas for the five years 1882-6 the annual average export has been only 1,248,803 pounds and the declared value $270,072, or 21⅝ cts. per pound. The wool clip of the past two years and the average clip of the five years' period are given in the following table:

Districts.	Coarse.		Fine.		Total Clip.		
	1886.	1885.	1886.	1885.	1886.	1885.	1882-6.
Lake Erie	447,481	516,856	130,126	118,593	577,607	635,449	658,122
Lake Huron	568,373	658,017	94,541	86,048	662,914	744,065	761,708
Georgian Bay	550,847	669,767	108,017	80,300	658,864	750,067	674,644
West Midland	840,963	1,023,306	209,930	174,821	1,050,893	1,198,127	1,253,737
Lake Ontario	760,846	861,036	227,609	183,490	988,455	1,044,526	1,063,351
St. Law. & Ottawa	958,560	1,023,567	228,122	201,199	1,186,682	1,224,766	1,237,197
East Midland	304,188	350,279	52,295	68,335	356,483	418,614	393,816
Northern Districts	49,665	59,147	16,304	12,105	65,969	71,252	57,676
The Province 1886	4,480,923		1,066,944		5,547,867		
The Province 1885		5,161,975		924,891		6,086,866	
The Province 1882-6	5,182,456		917,795				6,100,251

The total decrease in one year is over half a million pounds, which is mainly, but not wholly, due to the reduced flocks. The average weight of wool per fleece, as appears by the following table, was slightly less in 1886 than in 1885:

Districts.	Coarse Wool			Fine Wool.		
	1886.	1885.	1882-6.	1886.	1885.	1882-6.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
Lake Erie	5.75	5.77	5.62	4.89	4.91	4.91
Lake Huron	5.70	5.74	5.68	5.20	5.34	5.33
Georgian Bay	5.56	5.69	5.48	4.97	5.16	5.16
West Midland	5.76	5.78	5.71	5.33	5.24	5.29
Lake Ontario	6.04	6.12	5.97	5.29	5.43	5.33
St. Lawrence and Ottawa	4.87	4.90	4.77	4.73	4.93	4.82
East Midland	5.23	5.29	5.18	4.62	4.90	4.83
Northern Districts	5.59	5.62	5.64	5.06	5.10	5.16
The Province	5.52	5.58	5.46	5.04	5.14	5.08

As compared with the average of five years, last year is slightly higher in coarse wool and slightly lower in fine wool, but in both classes the average clip is lighter than in 1885. This lighter weight runs uniformly throughout all the groups of counties in coarse wool, and the only exception for fine wool is in the West Midland group. It is in these counties also that the highest average clip of fine wool is found in 1886. The Lake Ontario counties, however, make the highest average for the period of years, being a quarter of a pound in excess of the average for the province. These counties also take the lead in coarse wool, their average weight of fleece being half a pound more than the average for the province for the five years.

The number of hogs are given in the following table by groups of counties, and for the whole province :

Districts.		Hogs.		Totals.				
		Over one year.	Under one year.	1886.	1885.	1884.	1883.	1882.
Lake Erie		39,533	143,825	183,358	163,002	163,451	173,120	156,752
Lake Huron		16,089	53,853	69,942	69,709	87,521	81,824	74,041
Georgian Bay		18,864	57,329	76,193	77,763	91,711	82,832	78,054
West Midland		34,257	131,745	166,002	155,767	178,755	177,050	170,213
Lake Ontario		35,167	134,847	170,014	163,933	181,518	172,738	169,161
St. Lawrence & Ottawa		46,691	90,572	137,263	132,154	140,165	146,455	135,226
East Midland		15,179	35,148	50,327	51,418	60,843	62,236	61,027
Northern Districts		1,707	5,319	7,026	8,516	12,194	10,472	5,752
The Province	1886	207,487	652,638	860,125				
	1885	225,512	596,750		822,262			
	1884	257,711	658,447			916,158		
	1883	245,996	660,731				906,727	
	1882	252,415	597,811					850,226

There is little change to note in the numbers of successive years, unless it be that of the changed proportion of hogs over and under one year respectively—an indication, possibly, of a growing taste for meat of the younger animals.

The statistics of poultry are scarcely second in importance to those of any other line of stock of the farm, for, as a source of revenue, it may be questioned if any other class can show equally good results relatively to the cost of maintenance. The numbers for successive years are presented in the following table :

Districts.		Turkeys.	Geese.	Other Fowls.	Total Poultry.				
					1886.	1885.	1884.	1883.	1882.
Lake Erie		86,803	56,306	864,856	1,007,965	942,877	824,977	800,799	734,174
Lake Huron		34,390	52,988	652,679	740,057	655,455	671,133	616,699	534,357
Georgian Bay		36,805	56,154	486,720	579,679	524,427	525,544	475,973	439,944
West Midland		85,299	90,683	1,201,107	1,377,089	1,284,037	1,232,858	1,156,975	1,073,812
Lake Ontario		109,830	100,576	1,161,291	1,371,697	1,234,590	1,234,179	1,132,072	1,098,701
St. Law. & Ottawa.		141,285	94,101	1,158,615	1,394,001	1,247,901	1,266,214	1,193,355	1,046,869
East Midland		24,051	39,131	370,608	433,790	390,272	413,263	412,496	385,211
Northern Districts		4,251	3,817	56,569	64,637	57,246	69,438	58,975	39,052
The Province.	1886	522,714	493,756	5,952,445	6,968,915				
	1885	428,233	476,942	5,431,630		6,336,805			
	1884	445,532	540,130	5,251,944			6,237,606		
	1883	355,635	491,093	5,000,616				5,847,344	
	1882	310,058	533,357	4,508,705					5,352,120

The number of turkeys has increased in the five years by 70 per cent., and only in one year of the period is a decrease apparent; the number of geese remains nearly stationery; but the number of other fowls has increased at the rate of 360,000 a year.

The following table exhibits the number of each of the classes of live stock on every thousand acres of cleared land in the province :

Districts.	Horses.	Cattle.	Sheep.	Hogs.	Poultry.
Lake Erie	60.1	184.4	132.0	141.4	777.2
Lake Huron	50.0	209.5	160.3	58.5	618.5
Georgian Bay	48.7	185.6	197.2	79.3	603.4
West Midland	50.9	204.5	137.0	75.8	628.6
Lake Ontario	56.3	145.8	117.6	75.9	612.1
St. Lawrence and Ottawa	48.7	190.6	171.0	63.5	644.5
East Midland	48.4	175.4	134.3	64.0	551.5
Northern Districts	39.2	244.7	187.3	68.2	627.4
The Province... 1886	52.1	184.5	147.3	78.6	637.1
The Province... 1885	51.5	182.1	161.7	75.7	583.7
The Province... 1882-6	51.2	175.3	169.8	81.8	577.4

An increase appears under all heads excepting sheep, comparing 1886 and 1885 ; and excepting sheep and hogs, comparing 1886 with the average of five years. The Lake Erie counties lead in horses, hogs and poultry ; the Lake Huron counties in cattle, and the Georgian Bay counties in sheep. The northern districts, which appear to lead in the number of cattle, can hardly be reckoned in this comparison, as cattle in those districts find their principal feeding ground in the forest.

The Popular Breeds.—The answers to the question,—"What breeds or grades of milch cows are in greatest favor or give the best results?" have been given in such a manner as to indicate that many of the correspondents did not take the question as referring to usefulness in the dairy, but for the purposes of the writer, whether for beef, butter, cheese or milk production. Occasionally an answer will read "Jersey for butter, Ayrshire for cheese, Short-horn for beef," while another will say "The Short-horn grade is the most useful for beef and milk combined." With these facts in view it may be said that a large majority of correspondents show a preference for the Short-horn grade, and this is especially true of the farmers of western Ontario, where beef production occupies so much of the attention of the farmers. Another reason why Short-horns and their grades are so much in favor with western Ontario farmers is, that for many years they were almost the only improved cattle known in Canada, and the preference for them in many cases means that the correspondent knows them to be superior to the Canadian or scrub cattle with which he had to do when he commenced farming in this country. In the St. Lawrence and Ottawa counties, as well as the more easterly of the East Midland group, farmers were slower to avail themselves of the services of improved bulls for their herds, and by the time they had become alive to the necessity of improving their cattle it was as easy for them to procure the services of a Jersey, Ayrshire or Holstein bull as those of a Short-horn. They paid more attention to dairying than to beef production, and therefore many of them gave one or other of the milking breeds the preference. In this way eastern Ontario farmers, as a rule, show a preference for the dairy breeds, though some stand up stoutly for the milking strains of Short-horns and their grades. As yet it is too early to secure a very intelligent judgment on the relative merits of the improved breeds through these reports, though nearly all tend to show that the average Canadian farmer finds any one of the improved breeds with which he happens to become acquainted so superior to the Canadian "scrub" that he is very apt to be satisfied with it and content to look for nothing better. It is a notable fact that no correspondent

mentions any one of the improved breeds as having been tried and rejected by himself or his neighbors. In view of the fact that the Holsteins have been so recently introduced into Canada, it appears that they have found unusual favor among the farmers of eastern Ontario. Herefords are not mentioned, Polled cattle by only two or three correspondents in one locality, and Devons by very few. Ayrshires, Jerseys, Holsteins and Short-horns are invariably favored by correspondents who make any mention of them.

In some cases correspondents report the fat cattle as merely native animals, "too light for export." This would seem to show that the export trade is being supplied with improved grades and that exporters will waste no more space on shipboard with ordinary rough native or scrub stock. This shows that farmers are generally waking up to their own interests in the matter of stock improvement, and that many of them at least are making strenuous efforts to meet the wants of the export trade. It may be remarked here, however, that after all that has been said in favor of the "general purpose cow" these reports would indicate that she exists rather in theory than in practice. Canadian farmers may believe in her as in any abstraction that looked plausible enough in theory, but in perusing these reports it is always found that dairying and beef production do not progress on the same farm, nor generally in the same locality. The correspondent who has much to say about fat stock generally adds that there is little or nothing done in butter and cheese production in his locality; while on the other hand the report which tells of the flourishing condition of cheese-factories and creameries assures us that fat stock raising is neglected, farmers preferring to realize on the sale of milk and cream to the factories. If, then, the farmers of one section turn their cattle into beef, and those of another into butter and cheese, exclusively, it is not easy to understand just when, where and how the mission of the much-admired general purpose cow is to be accomplished. It is not impossible that in the near future Ontario farmers may be found breeding for definite purpose, as do any of those stockmen who make a specialty of a certain breed.

There were imported during the past year, for breeding purposes, 30 Short-horn, 162 Polled Angus, 54 Galloway, 61 Jersey, 19 Sussex, 14 Holstein, and 38 Red Polled cattle; but owing to the outbreak of contagious pleuro-pneumonia in the quarantine at Point Levis the whole of the Galloways, 11 of the Polled Angus and 3 of other breeds were slaughtered. The imports of sheep embraced 87 Shropshires, 7 Leicesters, 22 Oxfords, 14 Coltswolds, 61 Southdowns and 11 Hampshires.

FROM THE MAY REPORT.

Arthur J. Arner, Gosfield, Essex: Live stock generally look well. Working horses are in fine condition and brood mares and young horses are doing very well. Cattle are well shed of their winter coats and are doing finely owing to the abundance of grass and the fine weather. Pigs have not been highly fed owing to fear of plague, and consequently are not in excellent order. The plague has done great damage in adjoining townships, but our own township has suffered little, except in an indirect way, of materially lessening the number kept. There is a superabundance of fodder of all kinds except corn stalks.

Thomas Scane, Howard, Kent: Horses and sheep are in good condition; cattle and hogs fair. An epizootic disease has appeared amongst horses in some places, but is not serious.

Thomas F. Routledge, Orford, Kent: All live stock look well. There has been no disease amongst them, and there was plenty of fodder through the winter, while the grass is nearly a month earlier than in recent seasons.

George Russell, Yarmouth, Elgin: Live stock in good condition. A few cases of distemper among horses; several fatal. Any quantity of fodder.

James McKnight, Windham, Norfolk: Live stock are generally in a healthy condition; stock cattle are thin, but getting to pasture so early will do fairly well. There is plenty of fodder of all kinds.

John H. Houser, Canborough, Haldimand: Horses are not in as good condition as in former years; distempter or epizootic has kept them back. Some cows have died of milk fever. Lambs are in large supply and live stock, excepting horses, are in good condition.

Peter Metler, Pelham, Welland: Horses are in good condition; cattle, sheep and swine poor; fodder is rather scarce.

Charles Henderson, Wainfleet, Welland: The condition of live stock is good. There is no disease and no scarcity of fodder.

B. B. Smart, Sarnia, Lambton: Plenty of hay is left yet. It has only been worth from $6 to $8 on the market in Sarnia all winter.

Henry Ingram, Enniskillen, Lambton: Horses are in good condition, and cattle very good. There is a kind of disease amongst pigs. They swell up under the chops, and have great difficulty in breathing, but it does not seem to affect their appetite much, although they decrease in weight a good deal.

John Scott, Howick, Huron: The winter being mild stock seemed to thrive, and as nearly all stock is well housed throughout this township, we have turned out the best wintered lot I have seen since I came to this township twenty-three years ago.

John McMillan, Hullett, Huron: Cattle are healthy, but in some instances young animals are lean. No disease has prevailed to any extent. Among horses there was a little inflammation of the lungs, caused by a cold or a sort of epizootic.

Thomas Welsh, Huron, Bruce: Pigs have been decreasing in numbers the last year or two; they are scarcer than usual this year.

Lewis Lamb, Greenock, Bruce: In general cattle are poor, but horses and sheep are in fair condition.

M. J. Norris, Eastnor, Bruce: Live stock are in very fair condition. There was no scarcity of fodder through the winter.

A. Stephen, Sullivan, Grey: All kinds of live stock have stood the winter well, and look better this season than at any time in former years. There is no disease of any kind.

John Pepper, Bentinck, Grey: All kinds of live stock are in good condition. A mild form of pink-eye has affected horses in this locality. There has been plenty of fodder.

George Buskin, Artemesia, Grey: A few horses are very sick with distemper, but there are no deaths. Cattle are a little thin, but are doing well. Ewes are also thin in flesh in this neighbourhood, but there is a good supply of lambs. Spring pigs are very scarce. Hay has been selling at $10 per ton.

George McLean, Oro, Simcoe: Stock have come through the winter in pretty good condition, though some are rather thin. There has been no disease among cattle or hogs, but a great many horses have had distemper. Hay and straw were scarce, and had to be got in the early part of winter, but with careful feeding and the fine early spring, stock have come out much better than was expected.

Walter Scott, Nottawasaga, Simcoe: Live stock are in pretty good condition; horses good. Cattle thin, but strong, sheep and hogs have come through well. No disease has prevailed. There has been plenty of fodder but it is pretty well ate up.

George Cowan, Innisfil, Simcoe: Live stock is in fair order; horses good; cattle thin but lively; they got grass early. Sheep are in good order. No disease. Plenty of straw; hay scarce; in a good many points it was $14 per ton, and is now $10.

R. Coad, Ekfrid, Middlesex: All kinds of live stock are in a good average condition. In my experience of farming for the last thirty years in Canada, and thirty in England, I am of opinion that this is the healthiest country in the world for live stock.

Richard Jolliffe, North Dorchester, Middlesex: Live stock good; no lack of fodder. A few cases of hog cholera were reported in the township; but it was confined to a few farms, and at present I think it has altogether disappeared.

J. Grimason, Caradoc, Middlesex: The condition of live stock is pretty fair; but not so good as I have known it to be; some horses look thin; I see a good many cows thin; sheep on the road-sides do not look well; pigs are pretty good.

S. C. Tuttle, East Oxford, Oxford: Live stock of all kinds are in a very fair condition. Some horses have died from the effects of distemper, and quite a number from inflammation.

Alexander McFarlane, Norwich, Oxford: Live stock are better than last year. No diseases. Plenty of fodder.

William Brown, Blenheim, Oxford: Stock of every description is in good condition. There has been plenty of fodder; no disease.

Joseph Sifton, North Oxford, Oxford: The live stock all wintered well, and are now in good condition. Hog cholera attacked some animals and killed off a few; there is, however, no trace of it left now. Every farmer I know off had more than sufficient fodder.

Thomas A. Good, Brantford, Brant: Store cattle are rather thin; horses are looking well; sheep appear healthy but are rather poor; the lamb crop is good; pigs are healthy now, none have died since middle of the winter. Pigs had the cholera in this vicinity for several months last fall and winter; but it seems to be entirely gone now. Fodder was scarce, except turnips, of which there was a large surplus; hay was rather scarce, and there was not too much straw.

W. J. McLagan, Logan, Perth: Live stock are rather thin owing to straw not being very good. There has been a very bad cold like distemper among horses. Sufficient fodder.

Alexander Martin, Downie, Perth: Horses are in good order; but cattle are not so good, they miss the turnips owing to the failure last year; sheep wintered very well, and pigs are healthy. There was plenty of fodder throughout the winter.

John Booth, Maryborough, Wellington: All kind of stock are in good condition; no disease has prevailed, and there has been plenty of fodder.

J. H. Broadfoot, Nichol, Wellington: Live stock are very good, and there has been sufficient fodder. A few cases of pink-eye have occurred.

Richard Blain, North Dumfries, Waterloo: Horses, cattle, sheep and pigs have all come through the winter very well. There has been a full supply of fodder. Hay at present plentiful at $8 to $10 per ton.

Wm. Dynes, Mono, Dufferin: Cattle in general are poor; other stock is fair. There has been no disease worthy of notice. Straw and hay have been plentiful.

Matthew G. Varcoe, Amaranth, Dufferin: Live stock appear to be in fairly good condition. Horses look excellent as usual. The majority of cattle look thin, though strong and hearty. Sheep and pigs look well. There is a very material falling off in the number of sheep compared with previous years. With a few exceptions there was plenty of fodder, hay being about $8 to $10 per ton, and plentiful in some localities.

Isaac A. Merritt, South Grimsby, Lincoln: Live stock may be considered good. A sort of distemper has prevailed among horses, but no fatal cases to my knowledge. The distemper appeared in the latter part of the winter and lasted for about three months. A considerable amount of hay was pressed and shipped from this township during the winter and spring.

D. B. Rittenhouse, Louth, Lincoln: There are fewer sheep every year in this neighbourhood—one flock where five years ago there were two.

T. A. Walker, Ancaster, Wentworth: Horses are in first-class condition, and cattle, sheep and pigs, fair. No disease. Hay and straw are almost used up, but there is plenty of oats and other coarse grain.

John Shaw, Esquesing, Halton: There were a few isolated cases where pigs died with a disease where the symptoms appeared to be like the hog-cholera. Fodder of all kinds has been plentiful.

W. S. Buist, Albion, Peel: Horses look well, although some have been sick with influenza or colds resembling distemper. Cattle, sheep and hogs are in good condition in general. There has been plenty of feed.

D. James, Markham, York: A good many horses are sick. The spring weather opening so very warm, many were overworked, and a few died; many are diseased. Cattle and pigs are in good and sheep are in medium condition. There has been plenty of feed.

James McCullough, jr., Uxbridge, Ontario: Among farmers who keep their stock stabled and are good feeders, stock looks well. A good many of the farmers have sold their fat cattle, and some are just now being delivered at the railway station. Horses are in a good fair condition, but there is influenza in a few places. Sheep and pigs are about an average. There has been abundance of fodder.

S. Beall, Whitby, Ontario: Live stock generally are in good condition. There has been considerable distemper among horses this spring—some very malignant cases, a number of horses having died after a very few days' illness. Fodder does not appear scarce.

Robert Hodge, Clarke, Durham: Live stock a little thin, but healthy looking; a great deal of distemper has been recently amongst the horses and has left them a little weakened; doing very well. Stock cattle are fair; sheep, fair; pigs, very well. There has been quite enough of fodder at fairly remunerative prices.

R. J. Rutherford, Haldimand, Northumberland: Live stock looking rather thin at present, especially cattle and sheep, owing to lack of clover hay, very little of which was grown last year. There is an abundance of timothy hay and other fodder. Horses and pigs are generally in good condition.

Jas. Roberts, Alnwick, Northumberland: Stock are generally thin; a great many have died. Horses were affected with distemper in winter; not many died here. A great many cows died in calving. Fodder has been sufficient.

Wm. R. Dempsey, Ameliasburg, Prince Edward: Live stock are fair; epizootic has affected some horses. The winter seems to have been severe on cattle where they were not sheltered and properly cared for, and many are looking quite thin. Sheep and pigs generally are good; hay is plentiful and cheap.

Louis P. Hubbs, Hillier, Prince Edward: Live stock not so good as in other years. Oats being scarce, horses are poor; quite a number of cattle died after calving; sheep are looking well; spring pigs are scarce. There has been plenty of hay and straw, but very little of oats, and that of poor quality.

C. R. Allison, South Fredericksburg, Lennox: Horses are as a rule in fine condition; cattle not so good generally. There has been a disease of some kind, mostly confined to calves and young stock; they would lose the use of their limbs and die quickly. Some thought the cause was the midge in the clover hay they were fed with. Sheep and pigs have wintered well and healthy.

J. B. Aylesworth, Newburgh, Lennox: All kinds of stock came through the winter in good condition; no disease and plenty of fodder.

Thomas Andrew, Kennebec, Frontenac: Live stock, good; all wintered well, with no disease and plenty of fodder. The price of hay is $8 to $10 per ton: last spring it was $20 to $22.

Wm. A. Webster, Lansdowne, Leeds: Cattle are thin in flesh, they went to the stables last fall not in good condition owing to cold, wet weather. Horses are good. Sheep and pigs have done well. There was abundance of fodder of all kinds. This township carries a large stock, and yet sold several hundred tons of hay to be pressed and shipped to Boston.

Jno. C. Stafford, rear of Leeds and Lansdowne, Leeds: A good deal of distemper has made horses thin in flesh; although well fed, cattle did not stand the winter well, but are brightening up the last ten days.

G. C. Tracy, Williamsburg, Dundas: Horses are fair; cattle very bad; sheep poor and hogs good. Cattle have had something like a weakness in the fore legs, especially looseness of the bowels and general debility, some suppose a resultant of feeding diseased potatoes last fall. There has been plenty of fodder.

R. Vallance, Osnabruck, Stormont: Horses are good, but some distemper; cattle are in average condition; ship and pigs wintered well. Plenty of fodder and no disease.

D. B. McMillan, Lochiel, Glengarry: Horses, sheep and pigs are good; cattle fair. No disease nor scarcity of food.

Wm. Ferguson, Hawkesbury W., Prescott: Horses look very well; cattle are poorer than I have seen them for some years; sheep are fair; pigs very well kept. Some cattle have died: they take a weakness in the legs and become helpless. There has been plenty of fodder. Hay is selling here for $10 per ton.

W. J. Summerby, Russell, Russell: There was something like the epizootic distemper this year, prevalent a few years since, but more severe; several horses died of it.

John O'Callaghan, North Gower, Carleton: Cattle, sheep and pigs all wintered well. There were a great many horses badly affected with a cough and a disease of the head something like the horse distemper of years ago. There has been plenty of feed of all kinds.

Thomas Lett, Wilberforce, Renfrew: Some horses have had strangles. Some say there was more than strangles as quite a number of full-grown horses died from it. They swelled in the neck or throat and it seemingly went into their brain. If it was only the strangles it was never known to be so severe. Just sufficient fodder and no more.

Robert McLaren, Horton, Renfrew: There are some cases of glanders among horses in this section and I think the public generally should be kept well informed of the danger of this loathsome disease. In two or three cases in this county men have taken it, and with one of them it has terminated fatally. Fodder was scant enough with some, but there was considerable pressed hay brought in by rail.

Wm. McGarry, Drummond, Lanark: Stock came through the winter pretty well. Horses suffered with a bad kind of strangles and in some cases succumbed to the disease; it was very general in this section, but has disappeared. Fodder was plentiful.

Sidney Barclay, Ops, Victoria: Live stock are above average. An unusual number of foals and mares died; cattle are in fair condition; no disease; food sufficient; not so many sheep raised as formerly.

John Westlake, Eldon, Victoria: Oats were poor last year and so horses are poor; cattle are in fair condition; sheep good. Hay and straw have been plentiful.

F. Birdsall, Asphodel, Peterboro': Horses are good; other cattle are a little on the thin side. Sheep are fair, no disease. Plenty of fodder of all kinds.

M. McIntyre, North Monaghan, Peterborough: Horses, cattle, sheep and pigs are in good condition. There was generally a sufficiency of fodder throughout the winter.

John H. Delamere, Minden, Haliburton: Live stock has come through the winter fairly well, being in much better condition than last spring. Sheep are doing well; last spring the greater portion of the young lambs were lost, but this season I have not heard of any. Owing to the severe lesson of last winter, fodder, which was apparently a little short in the fall, was economized, and the spring being a full month earlier this year there has not been any great scarcity.

Dan. Williams, Glamorgan, Haliburton: All kinds of live stock are in fair condition. There is distemper in horses, and black quarter in cattle and calves; it is very fatal in calves. Fodder has been sufficient.

Anson Latta, Thurlow, Hastings: Horses look very well; cattle rather bad generally; sheep, about ordinary condition; pigs, very fair. There is any quantity of fodder, and no disease except ordinary horse distempter.

Fred. N. Toye, Draper, Muskoka: All kinds of live stock came through the winter very well. I have not heard of any disease. There has been sufficient fodder with a small quantity left over.

H. Armstrong, McKellar, Parry Sound: Live stock are better than usual. Few farmers here can yet afford to give the care necessary to make their horses look well, or in the way the best Ontario farmers generally keep theirs. Cattle are strong and vigorous; sheep are healthy, and there has been more than an average increase of lambs; pigs look well. Fodder has been plentiful.

Wm. Brown, Sault Ste. Marie, Algoma: All kinds of stock are good. No disease, and fodder in abundance.

FROM THE AUGUST REPORT.

R. C. Taylor, W. Tilbury, Essex: Pasture very poor; dried up. Horses stand it better than cattle; cattle quite poor; sheep poor and troubled with grub in the head; pigs require less water and swill makes them look better. Fat stock scarce; dairy produce only butter, no cheese. Butter sold as barter at the stores; at first over stock, but falling off.

S. Russell, Orford, Kent: Pastures have been quite good until the last two or three weeks, when dry weather set in. Live stock of all kinds is looking very fairly; fewer sheep raised here than in former years; I suppose it is on account of the low price of wool. Fat cattle are not abundant as many were forced on to the market during last fall and winter, and that at a sacrifice. Cheese and butter quite low in price.

Jno. Bradford, Dunn, Haldimand: Pasture poor on account of drouth; horses in good health but a little thin in flesh owing to poor pasture; sheep looking very well; pigs the same. Fat stock—there are some very good butcher's cattle, but not many heavy enough for export.

L. Buckton, Crowland, Welland: Pastures are nearly all dried up; horses appear in good condition; cattle are not doing as well as they might be; sheep in good order; pigs plentiful and in good condition. Owing to pastures failing beef cattle are not doing very well; dairy produce sufficient for the demand.

Jno. Morrison, Plympton, Lambton: Notwithstanding the drouth the pastures have continued fair all season and all kinds of stock have done well; creameries and cheese-factories have got more milk than ever before in this section.

E. Cooper, Howick, Huron: Pastures are very low on account of drouth; as a rule horses are good and well cared for in this township; sheep are rather thin; pigs are fed the whey of cheese-factories and are looking well; not many fat stock give milk to cheese-factories.

Peter Clark, Culross, Bruce: Pastures dried up; very little rain all summer, exceedingly hot during the day and cool approaching frost in the night. Stock thin in flesh, and milch cows failing badly in the milk supply.

A. Stephen, Sullivan, Grey: High pasture lands are very poor, owing to the drought. Low lying pastures are better. Cows and young cattle look well, in fact, horses, sheep, pigs and all live stock are in good condition. The fat stock did well on grass and were sold early in good condition. So far this has been an exceptionally good season for butter-making.

W. W. Colwell, Essa, Simcoe: Pastures are very fair owing to recent rains. Stock of all kinds are looking well. We had the epizootic influenza in our stables among our horses pretty badly this spring, but it has nearly disappeared. Its effects, however, are discernible on some of the horses yet.

Wm. Black, Westminster, Middlesex: Pastures never had an earlier start and were luxuriant till the advent of dry weather which scorched them so badly that they are now only beginning to recover. All kinds of live stock in good condition but prices are unremunerative.

Thomas Lunn, Oakland, Brant: Cattle turned early on pastures followed later on by dry weather, have caused many fields to look anything but green, which places stock of all kinds only in fair condition; no disease of any kind reported. Since Prof. Brown's address on permanent pastures, at our Farmers' Institute last winter, a good many farmers have sown considerable, and I would like to see a space in your next circular devoted to permanent pasture so that those that are growing it now may report their success, and induce others to sow more largely, that every farm may have its five or ten acres of permanent pasture. I sowed two acres last may, cut it once and it is now making a fine growth in spite of the dry weather.

W. D. Wood, Eramosa, Wellington: Pastures were good in early part of the season, but are becoming very brown now owing to the dry spell lately; stock is looking well and promises to fill the stalls well next winter. There seems to be a dwindling down of the dairy produce business, prices being too low to offer much inducement.

Robert Shearer, Niagara, Lincoln: Pastures completely dried up even where not eaten off, but owing to the very fine pasture early in the season stock are in good condition. Fat stock, however, are doing nothing now and the supply of milk and butter is falling off fast.

W. M. Calder, Glanford, Wentworth: Pastures have been completely used up for some weeks, and recent showers have not yet had the effect of restoring them sufficiently to meet the wants of the stock which, though partially hand-fed, has perceptibly failed in flesh. As a matter of course dairy produce, under these circumstances, is neither so rich nor so plentiful.

Colin Cameron, Nassagaweya, Halton: The pastures are getting very bare and dry, but the second crop of clover is growing nicely and there will soon be plenty of pasture. Horses, sheep and pigs look as well as usual, and cattle, where no scrub bull is kept, look very well, but where a scrub is kept there is very little interest taken in the feeding of cattle. The scrub is nearly extinct in this township. There is about the usual number of store cattle, but none fat at present, as nearly all the farmers stall feed during the winter months. Nearly all the cream is gathered by cream wagons, either for the Experimental Farm Company or one at Eden Mills. Quality of butter, excellent.

George Evans, jr., Georgina, York: Pasture is getting bare owing to the drouth. The condition of horses, cattle, sheep and pigs is very good, the pasture in the early part of the season being excellent. The live stock, getting a good start, will be able to hold their own now when the pasture is getting short. Very little fat stock on hand at present, nearly all being sold in June or forepart of July. Quite a large quantity of butter is made in this locality but little or no cheese.

Wm. James Grandy, Manvers, Durham: Pastures are in fair condition, caused by the abundance of rain. Live stock are in good condition; fat stock are in good supply; not many shipped yet. A creamery has been established in Bethany in which is manufactured into butter most of the milk in the eastern part of the township.

David Allan, Seymour, Northumberland: Since the rain pastures are improving. Live stock looking well; there will be a good many dry cows fit for the butcher shortly. We are principally engaged in the manufacture of cheese here; our prospects are better than last year.

A. J. File, Ameliasburg, Prince Edward: Pastures have been good, and consequently all stock are looking well. Very little stock fed for beef, but animals have matured nicely on grass to supply local demand. Milk also, owing to good pasturage, has been up to the average.

Robert Anglin, Pittsburg, Frontenac: Pasture is good; all kinds of stock are looking well and free from disease of any kind. Fat cattle not in much demand and prices low. Cheese-making is still on the increase, nearly every farmer in this section sending more or less milk to the factory and receiving therefor more ready cash than they do from all other produce sold off the farm, and at a time of the year when farmers seemingly want money most. I do not know of anything in connection with farming of late years that has tended more to the prosperity and comfort of the farmer and his family than cheese-making. It inculcates thrifty habits, early and systematic milking, improvement of stock, taking better care of them, increasing the number of cows over fourfold, increasing the fertility of the soil, infusing a spirit of emulation—neighbor vieing with neighbor as to whose herd gives most milk per cow, relieving the household of a large amount of heavy work as in butter-making, allowing more time for the cultivation of the mind, etc. These are only a few of the many advantages obtained. The quantity of cheese made and the price are in excess of last year.

A. Harkness, Matilda, Dundas: Pastures are unusually good, as we have had abundance of rain without any floods either to overflow or make the fields too soft, and all classes of live stock are in good condition. The butter and cheese product will be unusually large; the same is true of beef.

James Cattanach, Lancaster, Glengarry: The pastures are all that could be desired—green and sweet. All kinds of stock are in good condition. This year is favorable for dairying, but the cheese factories do not get over half what they got last year on account of low price.

J. Shields, West Hawkesbury, Prescott: Pastures never were better than they have been; an ample supply of rain the whole season. Stock look healthy; dairy products were never better.

Henry Armstrong, Clarence, Russell: Pastures are good and live stock are in good condition. The fat stock in this township are very large and in good condition also.

Isaac Wilson, March, Carleton: Pastures good and stock of all kinds in first rate condition. Fat stock and dairy produce plentiful.

John Whelan, Brudenell and Lynedoch, Renfrew: Pastures have been in excellent condition all summer and as a consequence all kinds of stock are in excellent condition—fat and healthy. I never saw grass for pasturing better in this part.

W. Patterson, Ramsay, Lanark: Stock of all kinds look well and the cheese-factories are getting a good supply of milk.

D. Kennedy, Otonabee, Peterboro': Pastures so far have been very good this season. Horses, cattle, sheep and pigs are all in good condition. The dairy produce has been large; the season as been very favorable.

Charles R. Stewart, Dysart, Haliburton: Pastures now are excellent—unusually good. The late rains have kept them green and growing, and cattle are in fine order. The same may be said of sheep. Not much fat stock here—all sold. Dairy produce—there is considerable butter being made of fair quality. We export largely. It is rather better than usual.

R. Blair, Carling, Parry Sound: Pastures good and fresh; horses, cattle, sheep and pigs in good order. There are a large number of fat cattle running in the bush. There is a good deal of butter made but little cheese.

R. F. Ogle, Campbell and Carnarvon, Algoma: Pasture good; live stock in good condition; considerable fat and store cattle will be shipped this fall. Butter in abundance; no cheese.

FROM THE NOVEMBER REPORT.

Lewis Simpson, South Dorchester, Elgin: Pastures have been good all through the season. Stock of all kinds look well. Cattle and hogs shipped extensively. Butter, there is none. There are no creameries in this part. Cheese is the main product as far as the dairy is concerned,

Jabel Robinson, Southwold, Elgin: Short-horn grade appears to be the favorite, but I believe that it is owing to the steers making much more valuable beef.

Sheldon Ward, Malahide, Elgin: A mixed farming is done in this section. Cheese factories are well patronized. No creameries. I think creameries would be a great improvement, as they would reduce butter-making to a system and the product command a better price.

William W. Wells, Woodhouse, Norfolk: Fall pastures are very good. Stock is in excellent condition. Fattening stock are doing as well as I have ever seen them do. We can spare large supplies. Dairy supplies seem to be getting more evenly balanced. Butter—what is made—is a better quality and bring a fair price. Cheese, also, is now paying equally well. Well selected Short-horn grades are the favorites.

C. Riselay, Bertie, Welland: Fall pastures abundant. Live stock in good condition. Ample supply for home consumption. Grade Short-horns are in greatest favor. Holsteins and Jerseys are being introduced.

Charles Gale, Sombra, Lambton: Part of June and July I had to feed my cattle hay; the pasture was brown; cattle ate leaves from the trees as far as they could reach in bush pasture. For want of rain many farmers drove their cattle three and a-half miles to River St. Clair to drink; many hauled water four miles for family use.

Alex. Drummond, Howick, Huron: I anticipate a shortage of fodder in this section this winter. Many farmers have sold off a number of young cattle, which is a great loss to the county. These cattle ought to be all kept and fed either for the home or foreign market.

John Scott, Howick, Huron: The butter in the township is all home-made, there being no factories, consequently there is but little choice butter made, and that which is good is generally taken to the store and traded for the same amount of goods per pound, as the waggon-grease kind, with which it is very often mixed by the storekeeper, and then sold for butter, both farmer and storekeeper suffering badly. Cheese is managed by the factory system and pays very well.

Henry Doupe, Usborne, Huron: There has been a cheese factory in operation for the two last years; it got burned last August. At a farmers' meeting, held for building again, all voted for a creamery except one, which shows they consider that butter-making is more profitable than cheese-making.

James Johnston, Carrick, Bruce: Pastures have been good this fall. Cattle have done well this fall, and are in good condition to go into the stables. Sheep are healthy and in good condition. Hogs the same. A fair supply of cattle. Short on sheep and hogs. A larger percentage of the farmers' milk now goes to the butter and cheese factories in this township. I think, for the whole season, there is not much difference as to money directly received from either, but the patrons of the creameries have the advantage of having the use of the skim milk. In the first of the season the butter gave the best money return, and in the latter part cheese was ahead. I think the creameries in the whole season, taking everything into account, have paid better and are more popular. We have two creameries and two cheese factories.

Walter Hartman, St. Vincent, Grey: The most popular cows are Short-horn grades, although there are a few Jersey grades here that give good satisfaction.

John Black, Bentinck, Grey: We have a creamery here and also a cheese factory. Some prefer selling the cream, while others think selling the milk pays best. My own opinion is that where a creamery is conducted in a proper manner it pays the farmer better to sell his cream and feed his milk to calves and pigs.

A. Elliott, Artemesia, Grey: I am of the opinion that there should be some system of butter inspection instituted other than that which now prevails, viz.: inspection by store-keepers. If there was a competent inspector in each village or town, and farmers would sell their butter on regular market days—say one day in each week—it would have a tendency to drive bad butter out of the market, and better prices would be realized for good.

W. W. Colwell, Essa, Simcoe: There are very few first-class dairy animals kept in this section except good grades; Ayrshires, Holsteins and Jerseys all have their advocates.

Malcolm Campbell, Ekfrid, Middlesex: Fall pastures are good and live stock in good condition to begin winter. Most of the cattle fit for market have been bought up. Hogs and sheep are scarce; lambs bring a good price and so do hogs. The manufacture of milk into cheese is very remunerative; butter is only made for home use. The Short-horn and native cows are in great favor for dairy and beef.

James A. Glen, Westminster, Middlesex: The dairy industry is flourishing; nothing to grumble at except the short pastures and scarcity of winter provender. The cutting box will be a great institution this winter, and with cheap bran and coarse grains every particle of rough straw and old hay may be utilized. Cheese is the favorite as compared with butter, except with stock-raisers. The best dairy cow is the kind that the *Live Stock Journal* calls a scrub—a breed without a pedigree, but looking like an Ayrshire grade or an improved Jersey—although a dash of Short-horn blood is liked by a good many on account of their ultimate destiny.

Wm. Elliott, West Williams, Middlesex: The dairy industry is extensive; butter far exceeds cheese in quantity. We have only the Short-horn grade.

Thomas Baird, Blandford, Oxford: Fall pastures are rather poor this season. Live stock in general will be somewhat thinner in condition this year than usual for winter feeding. The prospect of supplies of all kinds of meat for the home market is good, but I think there will be fewer fed for the old country market. The produce of the dairy this year is going to be small, compared with other years, the dryness of mid-summer being the chief cause of the shortage of the make of cheese, and little or no butter being made during the cheese season. The Short-horn grades are the favorite breeds. There are some beginning to try the Holstein grades.

E. H. Brown, E. Nissouri, Oxford: The grades with one or two crosses with other breeds are preferred. Jerseys and Holsteins are being introduced.

Thos. Page, Wallace, Perth: Fall pastures have been quite fresh up to date, but now may be considered exhausted. During the past week several droves of fat cattle, sheep and fat pigs have been sent away by rail. Drovers are buying up everything available.

T. McCrae, Guelph, Wellington: Pastures very good. Live stock good where cared for: others thin; feeding commenced for early sale for June; mostly not yet tied up. Sheep and hogs—about the usual quantity. Only one creamery—at the Model Farm—and it is said to have done fairly well. No cheese made near here.

John Rea, Eramosa, Wellington: Pastures are poor owing to the dry weather in July and August, and fields but short. Store cattle are thin for the season: there will be a good number fed in winter, as turnips are plentiful and grain is cheap. Hogs not plenty. There is no cheese factory in this township, as stock-raising is well attended to. The only butter factory in this section is at the Model Farm, Guelph. Short-horn grades are decidedly the favorites.

W. C. Smith, Wilmot; Waterloo: Pastures pretty good this month; all stock rather thin. Fat cattle for export are stabled in stone basements about the 1st of November and fed until the 15th of May. Sheep and lambs nearly all sold at improved prices. No hogs fed for market except those fed on whey at the factories. There are not so many cows kept as last year. Our butter factory is a failure; they do not get half the quantity of milk they used to get a few years ago. Our butter-makers invariably get first prizes at our A1 shows. Grade Short-horns are mostly kept; we are trying the Holsteins, but they don't fill the bill any better than the grade Short-horns.

A. G. Muir, N. Grimbsy, Lincoln: Fall pastures are generally good, and cattle look well; few sheep and hogs are grown. Not much interest taken in fattening stock except by a very few farmers.

W. C. Ingelhart, Trafalgar, Halton: Pasture short; progress of fattening slow; plenty of store cattle but not many fat. Few sheep kept; hogs well forward in fattening. The principal dairy industry in this section is producing milk for the Toronto market. Still there is considerable excellent butter made, but not much cheese. Grades of Durham and Ayrshire are the favorites.

Angus Ego, Georgina, York: Pastures are very poor this fall, owing to the dry weather this last summer, and they have never recovered. Live stock are pretty thin; grass-fed beef is not very good this season. Sheep are some better; they will do on short grass when cattle will not. Hogs are doing well, but rather scarce; many are taken away from this part "alive," and on foot. I am inclined to think the surplus of this place will not be large. Butter is not over plentiful on account of the shortness of grass. I am only aware of but one family that makes cheese; and cheese factories there are none in the township. The prevailing breeds are Short-horns and grades with common cows, although for dairy purposes they are rather inferior. But the people here are very much given to raising beef.

N. A. Malloy, Vaughan, York: Dairy industry in a depressed state by low prices. More attention given to butter than cheese. Short-horn heretofore in most demand; lately increased attention is being given to Ayrshire, Jersey and Hereford breeds.

F. C. Sibbald, Georgina, York: No cheese factory in this township; not much dairying done. Cattle mostly bred for beef—almost altogether. Short-horns or grades between those and the common cow are the favorites.

Henry Glendinning, Brock, Ontario: The condition of cattle in general is thin, owing to the drought in the early part of the fall, which dried up the pastures. There will be a plentiful supply of cattle for winter and spring markets. The dairy industry in this section is almost exclusively butter-making, and that followed on the old plan of each farmer's wife making her own and believing it to be the best. The whole system needs renovating; the factory or creamery system should be established.

R. S. Webster, Scott, Ontario: Pastures very poor. Live stock in rather poor condition off the grass. The root and other crops being good, progress will be made in stall-feeding during the winter months, but no cattle or sheep fit to sell off the grass. No hogs ready for market yet, not as many as usual being fed, as prices have been ruling low.

R. Osborne, Clarke, Durham: Plenty of butter for home use, but no farmers go into butter-making extensively in Clarke. We use the Short-horn grade more for beef than butter, but some of them are good for the dairy.

William Windatt, Darlington, Durham: We have had abundant rainfall since harvest, consequentl pastures are good and stock in good condition; prospect of an abundant supply for market.

Wm. Lucas, Cartwright, Durham: Fall pastures are excellent; cattle, sheep and hogs are in prime condition, and the prospect of supplies for market is good. There is neither a public dairy nor cheese factory in this township. The breeds of milch cows in most favor are Durhams and gradé Durhams.

David Allan, Seymour, Northumberland: Pastures very fair; plenty of grass-fed cattle and sheep. Hogs—sufficient being fed for home consumption. The dairy industry of Seymour is principally cheese; will yield about $6 per standard of 3,000 lbs. Milk—more than last year.

C. R. Allison, South Fredericksburg, Lennox: The dairy business is confined wholly to cheese in this part, no butter being made, except before and after the cows are taken from the cheese factory. Short-horns and Holsteins are being introduced.

R. J. Dunlap, Pittsburg, Frontenac: Pastures were generally good, not as luxuriant as they often are, but the herbage is sweet and stock look well. There are but small stocks of butter on hand; the demand has been equal to the supply. The cheese industry absorbs the milk supply to a large extent. The cows are mostly grades of Short-horns, Ayrshires, and common Canadians, with some fancies.

Alexander Ritchie, Storrington, Frontenac: The gentle rains and warm weather of September and since made pastures good. Stock would have been in better condition if farmers had prepared for the drouth. They should have sown corn and other stuff for green feed.

D. J. Walker, Storrington, Frontenac: Pastures are excellent; stock look well and are fattening well. There will be a good supply of cattle, sheep and hogs for market. Butter is not made in any quantity; cheese is all the rage; every farmer patronizes the cheese factory. Ayrshire and grade milch cows are in the greatest favor for dairies and give the best result.

M. Spoor, Wolfe Island, Frontenac: Pasture the best for many years; cattle and sheep are fattening fast, affording a large supply for market. No hogs are raised, except for local consumption. Large quantities of butter are exported in comparison with cheese. There is but one cheese factory and that is open but four months in the year. The most popular cows are Ayrshire crossed with Devons.

Thomas Andrew, Kennebec, Frontenac: This is a good pasture county for cattle and sheep, especially the latter; sheep do well here; from springs and lakes the country is well watered and pasture is plentiful.

Gideon Fairbairn, Edwardsburg, Grenville: Cheese is more remunerative than butter at present. The favorite cows are Ayrshires, although Holsteins appear to be coming in favor for the past two years.

John Ferguson, Wolford, Grenville: The condition of fall pastures is good; live stock in fair condition, that is cattle and sheep; hogs are not raised here as largely as formerly, pork being so low farmers cannot make it pay. The product of butter is very small as compared with cheese. We have three cheese factories in this township manufacturing the milk of at least fifteen hundred cows; butter would not be more than one-fourth of the dairy product. Holstein and Ayrshire are the breeds most in favor as milkers. The Holstein bids fair just now to supersede all others.

James Clark, Kenyon, Glengarry: Fall pastures are not as good as usual. Live stock in good order to begin the winter; sheep all marketed; hogs in abundance, the supply exceeds the demand. In the dairy business cheese is the sole production, no butter being made to any extent. Ayrshire and Short-horn mixed seem to be the favorites here, as they serve for dairy purposes and beef at one raising.

John Shields, West Hawkesbury, Prescott: Not much butter is made here this season; mostly cheese. There are very few well-bred cattle here, although a few of our farmers are purchasing some thoroughbred stock. Cannot say particularly what breeds are best liked here; from what I can learn the Ayrshires are considered the best dairy cows; the few who are raising for beef prefer the Short-horns.

John McCleland, Darling, Lanark: Fall pastures look well. Live stock are not looking as well as might be expected. The grass seems to be lacking in substance. Nearly all farmers in this township make butter, but a good many favor the cheese. There are no cheese factories here.

A. R. Kidd, Dummer, Peterboro': Owing to the plentiful rain fall, the pasture is splendid and, as a result, live stock of all kinds look well and the prospect is a good surplus for market.

James S. Cairnduff, Harvey, Peterboro': Pastures very good this season; the rain kept them green. Live stock in good condition. Very few fattening cattle here; the drovers buy them up as stockers and ship them south and west. Hardly enough sheep and hogs here for home consumption; none for market.

Charles R. Stewart, Dysart, Haliburton: Both pastures and live stock are in fair condition. Nearly all the fat cattle have been sold. Sheep are not plentiful. No cheese made here. The export of butter has been very large. Short-horns or Durham grades are the best; Polled Angus have just been introduced.

J. M. Ansley, McDougall, Parry Sound: Pastures good; live stock in good condition. Owing to the large rains and vast supply of water, cattle here fatten easily without any attention from owners. Sheep and hogs are scarce. There will be plenty of beef, but large quantities of pork must be imported. Dairy produce (butter) low; there is a good quality made, but a great portion would be culled very closely if put in competition with the better portions of Ontario. Our facilities for a supply are beyond the average, considering that there is abundance of pasture, feed and water, but quality is not what it should be. Cheese is not made in this vicinity. I would like to see the creamery butter system introduced here, as I believe it would tend to give a good quality of butter and increase the value of the dairy products of this district.

CHEESE.

The low prices of 1885 left the cheese industry of the province in a depressed state at the close of that season, and although a revival took place last year it set in at too late a date to permit of a full recovery. It was not until July that the demand became active in England, and although selling rates were satisfactory from that time forward the average price for the season's make fell considerably below the prices of 1883 and 1884. And although the number of factories was increased, the depression of 1885 had also another effect; it led many farmers to withhold their patronage from the factories. The average number of patrons per factory last year, for 455 factories making complete returns, was 51, and the average number of cows 322; whereas the average number of patrons for 433 factories in 1885 was 61, and the average number of cows 358. As a consequence, the production of cheese per factory last season was less than in the previous one, although the better prices came very near to making good the value of product per factory. The following table (which is an estimate of the product of all factories in operation, computed from the data of those which made returns) presents a comparison of results for four successive seasons:

—	1886.	1885.	1884.	1883.	Averages, 1883-6.
No. of factories in operation..	770	752	751	635	727
Pounds of milk used	654,703,243	733,437,254	685,964,727	539,696,197	653,450,355
Pounds of cheese made	63,721,621	71,209,719	66,939,573	53,513,032	63,845,986
Value of cheese .....$	5,893,818	5,781,569	6,998,889	5,589,339	6,065,879
Value of cheese per lb.....cts.	9.249	8.119	10.456	10.445	9.501
Pounds of milk to 1 lb. of cheese	10.274	10.300	10.248	10.085	10.235
Value of product of 100 lbs. of milk... .....cts.	90.02	78.83	102.03	103.56	92.83
Average per factory, of—					
Milk used .....lbs.	850,264	975,315	913,402	849,915	898,831
Cheese made ..... .lbs.	82,755	94,694	89,134	84,272	87,821
Value of cheese .....$	7,654	7,688	9,319	8,802	8,344

This is an estimate based on returns of milk used, cheese made and sales value of cheese at 626 factories. The product, it will be observed, is nearly 7,500,000 pounds less than in 1885, but the higher prices enabled manufacturers to realize $112,000 more in 1886 than in 1885. Compared with 1883 and 1884, however, the value of product is relatively much less,—being only $300,000 more than in 1883 although the quantity of product was greater by 10,000,000 pounds, and $1,100,000 less than in 1884, when the product was only 3,200,000 pounds more. A comparison made on the basis of 100 pounds of milk shows that the value of product in 1883 was 103.56 cents; in 1884, 102.03 cents; in 1885, 78.83 cents, and in 1886, 90.02 cents. A further comparison of the quantity and value of product per factory shows the lowest average of both to belong to 1886, the highest average of quantity to 1885, and the highest average of value to 1884. But although the product per factory was nearly 12,000 pounds more in 1885 than in 1886, the value per factory was greater by only $34. In 1884 the value per factory exceeded that of 1886 by $1,665, with a product larger by 6,379 pounds; and in 1883, with a product larger by 1,517 pounds, the excess of value was $1,148. For the four years the yearly average of product is shown to be 63,845,986 pounds, or 87,821 pounds per factory; and the yearly average of value $6,065,879, or $8,344 per factory.

In the following table a more accurate comparison of results in the four years is made from returns of factories giving complete statistics of the quantity of milk used and cheese made, the sales value of cheese, the number of patrons of factories, and the number of cows whose milk was supplied :

—	1886.	1885.	1884.	1883.	Averages, 1883-6.
No. of factories returned.....	455	433	445	385	430
Quantity of milk used .....lbs.	404,036,443	436,335,359	426,260,665	327,353,679	398,496,537
Quantity of cheese made... "	39,361,482	42,479,047	41,595,027	32,495,811	38,982,842
Total value of cheese ..... $	3,646,564	3,446,514	4,357,208	3,396,882	3,711,792
No. of patrons.....	23,244	26,300	24,015	19,797	23,339
No. of patrons per factory.....	51	61	54	51	54
No. of cows	146,325	154,824	158,366	117,577	144,273
No. of cows per factory.....	322	358	356	305	336
Average yield of milk per cow.....lbs.	2,761	2,818	2,692	2,784	2,762
Average product of cheese per cow..... "	269.0	274.4	262.7	276.4	270.2
Average value of product per cow..... $	24.92	22.26	27.51	28.89	25.73
Average return for each patron ..... $	156.88	131.05	181.44	171.59	159.04
Average No. of working days	156	157	159	156	157

These returns embrace about sixty per cent. of all the factories in operation each year, and the totals and averages under each head of comparison are either taken or computed from the statistics of factories returned. The number of patrons, as well as the number of cows whose milk is supplied to a factory, cannot be stated with absolute exactness, because no factory can hardly maintain a steady uniformity of either number throughout the making season. The schedule calls for the averages of each for the season, and it may be assumed that these are given in the returns with a very close approach to accuracy. The length of the factory season, as the last item of the table shows, is nearly constant—ranging in the four years from 156 to 159 days. In some portions of the province the season is longer than in others, and in the same district some factories are kept open a longer time than others ; the length of the season, as given in the table, is the average for all factories and for the whole province. Last year's was three days shorter than that of 1884, but only one day shorter than the average of four years. The average number of patrons per factory was ten less than in 1885, and three less than in 1884. The average number of cows per factory was also less than in 1884 and 1885, being 34 below the former and 36 below the latter year, but it exceeded the average of 1883 by 17. The average yield of milk per cow for the season shows that the best record was made in 1883 and 1885, and the poorest in 1884—the yield per day in each of the two former years being 18 pounds, and in the latter year only 16.8 pounds. In 1886 the yield per day was $17\frac{2}{3}$ pounds, which was also the average of four years. The best of these is a low average, and there is ample scope for levelling upwards. A yield of 25 pounds per day for the factory season of 157 days ought to be reached without great effort.

The eastern and western dairy districts still present interesting points of comparison. The following table gives the statistics of factories making complete returns in the

principal cheese-making counties in each district—127 in the western and 184 in the eastern counties :

Western.	Days worked.	No. of Cows.	Milk.	Yield of milk per cow per		Cheese.	Value.
				Season.	day.		
			lbs.	lbs.	lbs.	lbs.	$
Elgin	171	3,991	12,067,538	3,024	17.7	1,150,058	109,194 96
Norfolk	160	3,903	10,599,268	2,715	17.0	1,021,499	97,613 87
Lambton	150	3,718	10,193,741	2,742	18.3	958,819	92,713 68
Huron	140	4,119	11,087,129	2,692	19.2	1,052,164	103,036 82
Bruce	142	4,384	11,538,351	2,632	18.5	1,116,297	109,610 78
Middlesex	172	9,437	29,459,080	3,122	18.2	2,773,919	267,947 79
Oxford	179	15,743	49,184,268	3,124	17.4	4,720,715	450,357 64
Perth	155	7,265	20,891,844	2,876	18.5	1,989,347	195,179 69
Wellington	146	3,571	9,895,607	2,771	19.0	949,526	91,460 25
Totals and averages	163	56,131	164,916,826	2,938	18.0	15,732,344	1,517,115 48
Eastern.							
Northumberland	156	4,573	13,524,493	2,957	19.0	1,330,572	115,188 95
Prince Edward	150	3,149	8,162,309	2,593	17.3	800,668	68,600 27
Lennox & Addingt'n	149	5,596	14,820,447	2,648	17.8	1,458,476	128,694 36
Frontenac	144	2,951	7,227,451	2,449	17.0	688,960	61,639 06
Leeds & Grenville	159	21,055	59,042,424	2,804	17.6	5,867,552	526,464 29
Lanark	144	3,766	9,792,553	2,600	18.1	979,059	86,561 00
Peterborough	148	2,805	7,593,635	2,707	18.3	729,453	65,842 61
Hastings	162	13,385	38,638,804	2,887	17.8	3,937,685	342,593 94
Totals and averages	156	57,280	158,802,116	2,772	17.8	15,792,425	1,395,584 48

The number of cows is nearly equal in both groups ; the average yield of milk per day is one-fifth of a pound in favor of the western cow, and the average working season of factories is seven days longer in the west than in the east ; yet with an advantage of 166 pounds in the yield of milk per cow, or 6,114,710 pounds in the aggregate, the cheese product of western factories is less than that of the eastern factories by 60,081 pounds. This is due, as has been shown in previous reports, to the superior cheese-producing quality of eastern milk. Taking the factories which have made full returns in the same groups of counties for four years, the average quantity of milk required to make a pound of cheese in each of the districts is shown in the following table for each year and for the period, computed from the total quantity of milk used and of cheese made :

Year.	Western Counties.			Eastern Counties.		
	Milk used, lbs.	Cheese made, lbs.	lbs. Milk = 1 lb. Cheese.	Milk used, lbs.	Cheese made, lbs.	lbs. Milk = 1 lb. Cheese.
1883	128,875,665	12,467,389	10.3372	111,748,070	11,404,714	9.7984
1884	174,642,274	16,675,134	10.4732	164,915,219	16,488,206	10.0020
1885	176,197,628	16,835,301	10.4660	170,819,421	16,910,855	10.1012
	164,916,826	15,732,344	10.4828	158,802,116	15,792,425	10.0556
Totals	644,632,393	61,710,168	10.4461	606,284,826	60,596,200	10.0053

For the average of the four years it appears that the quantity of milk required to make one pound of cheese is nearly half a pound less in the eastern district than in the western,

and for the four years' make of the western counties, giving the returns used, this means 2,720,000 pounds of lower production. A further comparison of the industry in the two districts is presented in the following table, showing totals and averages for 1885 and 1886 and for the period 1883–6 :

	Western Counties.			Eastern Counties.		
	1886.	1885.	1883-6.	1886.	1885.	1883-6.
No. of factories in operation	218	227	225	319	283	278
No. of factories making complete returns	127	138	134	184	176	169
Averages per factory of—						
Milk used	1,298,550	1,276,794	1,229,639	863,055	970,565	903,045
Cheese made	123,877	121,995	117,775	85,828	96,084	90,257
Value of cheese	11,946	10,193	11,586	7,585	7,553	8,302
No. of patrons	73	76	73	46	53	47
No. of cows	442.0	424.3	417.0	311.3	348.4	327.7
Yield of milk per cow—						
For the season	2,938	3,009	2,948	2,772	2,786	2,755
Per day	18.02	18.64	18.14	17.77	17.41	17.46
Product of cheese per cow—						
For the season	280.28	287.54	282.41	275.71	275.81	275.38
Per day	1.72	1.78	1.74	1.77	1.72	1.74
Value of product per cow—						
For the season ..... $	27.03	24.02	27.78	24.36	21.68	25.33
Per day ..... cts.	16.58	14.88	17.10	15.62	13.55	16.05
Average No. of days worked	163	162	162	156	160	158

Here in the averages per factory, the yield of milk per cow and the product and value of product per cow the higher figures are found almost uniformly in the western group of counties, the one exception being under the head of daily product of cheese per cow, in which the averages for the four years are equal.

BUTTER.

The number of creameries in operation in the province during the past year was 47, being 20 more than in the season of 1885. Returns have been received from 31 of these, two of which make cheese as well as butter. The returns are presented in detail by counties in table XIII., showing the total product to be 823,853 pounds of butter and 96,156 pounds of cheese, and the total value of product $166,327. The average price of the butter ranged from 16.53 cents in Norfolk to 21.87 cents per pound in Dundas, or 19.52 cents for the province, as shown by the returns of sales made. The cheese realized only 5¾ cents per pound, which is doubtless a good enough price for the skim-milk article. Two establishments reporting the combined industries used 1,285,234 pounds of milk, the product of which was 31,242 pounds of butter and 96,156 pounds of cheese, valued at $11,832,290. Six other creameries also collected the milk, using 3,826,623 pounds to make 147,144 pounds of butter, valued at $30,348.46. The average quantity of milk used to make one pound of butter in these creameries was 26 pounds, whereas in the combined establishments the quantity was 41 pounds ; but while the value of product in the former was 79.33 cents per 100 pounds of milk, its value in the latter was 92.06 cents. This shows a balance in favor of the conjoined manufacture of about 12¾ cents per 100

pounds of milk, and it appears by the report of the Experimental Farm creamery that the value of the buttermilk is only 2½ cents, being .64 cent per pound of butter product. The following table gives the statistics of twenty establishments in 1886 and of eight in 1885 which gave complete returns under each head of the schedule, together with averages for the four years, 1883-6 :

Schedule.	Butter making.			Butter and Cheese making.		
	1886.	1885.	Average per Creamery 1883-6.	1886.	1885.	Average per Creamery 1883-6.
Number of creameries.....	20	8	1	2	2	1
Number of patrons.....	1,642	671	77	95	101	50
Number of cows.....	7,580	3,490	363	525	606	293
Quantity of butter made ..lbs.	616,054	272,972	29,005	31,242	27,873	14,568
Quantity of cheese made .. "	.....	.....	.....	96,156	126,591	61,688
Value of product ..... $	120,466	54,011	5,785	11,832	13,402	7,600
Value of product per cow—						
Per season ..... $	15.89	15.48	15.94	22.54	22.11	25.94
Per day .....cts.	12.41	11.16	12.36	14.54	14.36	16.73
Average date of opening	May 19	May 14	May 20	May 1	May 3	May 3
Average date of closing.....	Oct. 16	Oct. 25	Oct. 18	Oct. 31	Oct. 26	Oct. 29
Average No. of days worked .	128	139	129	155	154	155

The number of cows whose milk or cream was supplied is the average for the season, but obviously it cannot be considered an exact number. No patron, possibly, supplies the milk of the same number of cows regularly throughout the milking season, while some patrons for various reasons supply for a part of the season only. Still the average number is no doubt very nearly correct, as comparison of the averages of value and product for the several years appears to establish. For 1886 it is 379 for each creamery making butter only, and for the four years 1883-6 it is 363, whereas the number of cows whose milk was supplied to cheese factories was only 322 in 1886 and 336 for the average of four years. The yearly average value of product per cow for the four years from the creameries was $15.94 and from the factories $25.73; this difference is not owing wholly to the longer season of factories, for while the value of daily product at the factories is 16.39 cents it is at the creameries only 12.36 cents per cow. For the creameries making butter and cheese the average value of product per cow for the four seasons was $25.94, and the average per day 16.73 cents.

W. W. Wells, Woodhouse, Norfolk: I have no doubt that our factories would be largely benefited if inspected by a good, practical inspector of dairies. What we want is legislation that will bring the management of factories under the practical science of dairying.

Arthur Simenton, Seneca, Haldimand: Our factory worked well the whole season, and paid remarkably well during the latter half of it. It has been running two summers, and, I think, will be a paying industry. There are several private factories in this township, each having about twenty cows. Butter has paid well during the last season, the principal market for it being Hamilton.

Charles Gale, Sombra, Lambton: But for the poor pasture of June and July there would have been twice the quantity of cheese made here. The cows, for want of good food, failed to give much milk.

George Buskin, Artemesia, Grey: The Markdale factory has closed its term of three years, and the Flesherton factory its term of five years. Of late they have only wiggled along. The cost of running was heavy, and many patrons are not satisfied with the amount they received. I think it will be hard to start anew next summer.

John Glaspell, Tiny, Simcoe: There is neither a cheese factory nor a creamery in this township. A movement was made last summer to start a creamery, but few took any interest in it, and so the matter was dropped.

Thomas Mitchell, Dumfries N., Waterloo: There is no creamery or cheese factory in this part of the county. The majority go in for a kind of mixed farming, stock-feeding being one of our principal industries. We raise what we can and buy good grains in the fall. My next neighbor often feeds as high as two car loads per annum.

Edward Halter, Waterloo, Waterloo: I do not think there is a creamery or cheese factory in our township. Guelph, Galt, Berlin and Waterloo consume all the butter we can make, and high prices are generally paid for a good article. This township is well situated as to local markets.

Thomas Shaw, Binbrook, Wentworth: There is not a cheese factory or creamery in this hard clay township, and there never has been.

John W. Findlay, Scarboro', York: There is no cheese factory or creamery in Scarboro', but considerable quantities of butter and cheese are made, and a great deal of milk is sent to Toronto—once a day in winter, and morning and evening in summer. This pays the farmer better than butter or cheese.

Simpson Rennie, Scarboro', York: I do not know of such a thing as a cheese factory or creamery in this township. The farmers either make their own butter or send the milk to Toronto. I may say that a good portion of the farmers here are feeding cattle, the most of which are shipped to British markets in the spring.

Samuel Taylor, Mara, Ontario: There is not, I am sorry to say, one creamery or cheese factory in this whole section, and because of no business-like way of marketing butter—or making it, for that matter—it is unremunerative in price and unsatisfactory in quality.

F. Kosmack, Admaston, Renfrew: There is no cheese factory or creamery in this township. Several attempts have been made to establish a factory, but owing to the peculiar circumstance that the great majority of farm buildings are placed at the end of the farm furthest from the main road, it would be too expensive to gather the milk.

Donald Grant, Monck, Muskoka: There is neither a creamery nor factory in this township, nor in any township of the district. I consider it a great drawback to this part of the country, particularly the lack of a cheese factory, as I have not the least doubt it would pay all parties well.

Edward Bray, Stephenson, Muskoka: There is no factory or creamery in this neighborhood. The nearest factory is at Huntsville, six miles distant, but it has been closed for two years. It was in operation only one year, and the shareholders lost by it, the farmers not co-operating heartily with them. I think that the cost of delivering milk and the insufficient number of cows were the causes of the failure.

THE APIARY.

The reports from the apiarists of the province were extremely contradictory as to the success of their industry during the past season. Some correspondents stated that the honey yield was an unusually large one, that bees swarmed well and were in fine condition for winter, while others in the same township complained that the very opposite condition of things prevailed. Taking the province as a whole, however, the favorable reports were in a decided majority, and the yield of honey may be described as from fair to good. Bees generally came out of winter quarters in better condition than for several years back, though a few apiarists lost a large portion of their stocks owing to the severity of the weather. The early part of the season was generally favorable to the production of honey, owing to the abundance of bloom of one kind and another, and even in many places where the subsequent drouth almost put an end to honey gathering, so much had been stored in the time of plenty that both the bees and their owners had a fairly good supply. Other apiarists, however, whose swarms were dependent on buckwheat and other special blooms, which completely failed in many places, were not so fortunate, and with them the supply was deficient. Bees swarmed fairly well in the early season and were reported in good condition. The area of apiculture appears to be extending in the province, notwithstanding that some old apiarists have given up the industry, owing to the fatality of recent winters, and the fact that the low price of honey—eight to ten cents per pound is a figure frequently quoted—is very generally complained of.

FROM THE AUGUST REPORT.

Dan. Stewart, Tilbury W., Essex: They have been very prolific; increase three to one. The honey crop was good in the forepart of the season: apple bloom, white clover, and the forepart of the linden crop, good; later part of linden crop short by drouth.

S. Russell, Orford, Kent: Bees wintered well. I started with six colonies and have twelve now. Extracted 875 lbs. honey. One of my neighbors has increased from nine colonies to fifty by natural swarming. This is what I would call "swarming to death." Honey sells (extracted) from ten to twelve cents per lb.

A. N. Simmons, Middleton, Norfolk: Where attention has been given them they have multiplied very rapidly, and in a measure recompensed for the heavy losses suffered last winter by some bee-keepers, and the yield of honey promises well by the close of the season.

F. A. Hutt, Stamford, Welland: The bees have been healthy, very prolific, and have gathered more honey than last year up to this date. Our apiary has doubled and has carried in upward of 1,600 lbs. of honey from 22 colonies.

Hugh Murray, Bruce, Bruce: Bees have not turned out as well as was expected; a few frosty nights when the white clover was in bloom affected the product. Basswood did not amount to much. Colonies would average from 75 to 100 lbs. each, *i. e.* ordinary strong colonies. Swarming commenced earlier, but they did not swarm so much this season. No disease beyond the usual spring dwindling.

R. A. Brown, W. Nissouri, Middlesex: Where bees were stimulated with feeding last fall and early spring they swarmed well, but otherwise have not more than averaged one swarm each. Product smallest for years. Only the early swarms give a surplus; the late ones won't have half enough to winter them. The true way of success with bees is to feed some each day for the last two weeks of September and the first two weeks of October. This makes them breed, and those young bees are the only ones ever live to do any work the following spring, as every old one will surely die before they can get anything to do in the spring.

F. Malcolm, Blandford, Oxford: The general complaint last spring was that bees were weak, not so much in the wintering, but their condition last fall was not conducive to breeding late. Some have not made up their loss; they were very slow to swarm. Those who increased at all got no honey; honey poor crop; 20 lbs. per colony.

Christian S. Groh, Waterloo, Waterloo: Bees left winter quarters very weak, have not swarmed very often. The honey crop was light. The time that white clover and linden was in bloom it was too dry and honey will be below average

H. A. Walker, sr., Hope, Durham: The best year for increase and honey that I remember. I have some old hives which have given three swarms and 50 lbs. of comb honey, and my stock has increased from 18 to 50.

Wm. Kyle, Williamsburg, Dundas: Although the white clover has been plentiful in the fields beyond any year in my memory, the bees have done very poorly, owing I think to the cold season.

R. Lawson, jr., Lanark, Lanark: Last winter was a hard one on bees in this locality. Some lost half, and some were left without any. Very little swarming; what honey there is is good quality so far. Bee-keepers here think it will be a poor season for honey.

A. Wiancko, Morrison, Muskoka: I know of four bee-keepers here: know them personally; heard no complaints. They got them well through the winter; honey will not be an extra great crop, yet satisfactory.

STATISTICS OF

LIVE STOCK AND DAIRY PRODUCTS.

HORSES.

TABLE No. I.—Showing by County Municipalities and groups of Counties the number of Working Horses, Breeding Mares and Unbroken Horses in Ontario in 1886; also the totals for the five years 1882-6.

Counties.	Working Horses.	Breeding Mares.	Unbroken Horses.	Totals.				
				1886.	1885.	1884.	1883.	1882.
Essex	7,187	2,825	4,356	14,368	14,112	14,385	14,362	11,752
Kent	9,390	3,623	5,451	18,464	17,184	15,949	17,329	14,304
Elgin	7,664	2,299	3,886	13,849	13,675	13,266	13,904	12,939
Norfolk	6,319	1,985	3,306	11,610	11,491	11,540	12,110	11,015
Haldimand	5,427	2,116	3,243	10,786	10,394	10,841	9,787	9,055
Welland	4,901	1,413	2,558	8,872	8,552	8,135	8,432	8,046
Totals	40,888	14,261	22,800	77,949	75,408	74,116	75,924	67,111
Lambton	7,076	2,453	3,953	13,482	13,127	13,726	12,493	11,481
Huron	12,351	5,846	8,651	26,848	26,478	25,460	26,831	22,484
Bruce	9,900	3,861	5,788	19,549	18,584	17,228	19,100	16,161
Totals	29,327	12,160	18,392	59,879	58,189	56,414	58,424	50,126
Grey	12,467	4,843	6,493	23,803	23,402	21,758	23,292	22,316
Simcoe	12,149	4,389	6,487	23,025	22,652	21,558	22,585	20,163
Totals	24,616	9,232	12,980	46,828	46,054	43,316	45,877	42,479
Middlesex	13,515	5,242	7,522	26,279	26,651	25,066	25,649	23,743
Oxford	9,472	3,212	4,543	17,227	17,149	16,151	17,721	16,594
Brant	5,241	1,501	2,633	9,375	8,824	8,860	8,838	8,201
Perth	9,037	3,757	5,005	17,799	17,906	17,420	18,535	16,013
Wellington	11,064	4,147	5,617	20,828	20,273	19,351	20,848	18,866
Waterloo	7,164	2,124	2,813	12,101	12,066	11,742	12,177	11,288
Dufferin	4,190	1,645	2,010	7,845	8,402	7,734	7,846	7,208
Totals	59,683	21,628	30,143	111,454	111,271	106,324	111,614	101,913
Lincoln	5,243	1,476	2,476	9,195	8,304	8,509	8,639	7,736
Wentworth	6,777	2,022	3,162	11,961	11,698	11,561	11,698	10,712
Halton	4,854	1,574	2,314	8,742	8,125	8,152	7,943	7,510
Peel	6,419	2,288	3,153	11,860	11,378	10,983	11,256	10,283
York	11,890	5,289	6,890	24,069	24,259	22,424	23,621	22,063
Ontario	8,701	3,958	5,362	18,021	18,148	17,791	18,789	16,390
Durham	7,897	2,591	4,664	15,152	14,154	13,916	14,013	12,973
Northumberland	9,200	2,484	5,000	16,684	15,911	15,425	15,069	12,958
Prince Edward	5,572	1,916	3,032	10,520	10,101	9,224	9,917	8,640
Totals	66,553	23,598	36,053	126,204	122,078	117,985	120,945	109,265
Lennox and Addington	5,878	1,512	2,746	10,136	9,870	9,244	9,519	9,570
Frontenac	5,251	1,759	2,649	9,659	8,791	8,155	8,768	9,432
Leeds and Grenville	9,974	2,949	5,473	18,396	17,340	16,518	17,713	15,372
Dundas	4,098	1,299	2,251	7,648	7,691	6,976	7,711	6,562
Stormont	3,098	1,316	2,251	6,665	6,609	5,808	6,392	6,084
Glengarry	3,800	1,769	2,694	8,263	8,293	7,882	8,709	7,989
Prescott	3,032	1,469	2,031	6,532	7,039	6,211	7,128	6,439
Russell	2,124	944	1,283	4,351	4,539	4,404	5,402	3,665
Carleton	7,244	2,464	3,622	13,330	12,802	12,819	12,875	11,475
Renfrew	5,783	1,996	2,659	10,438	10,120	9,721	9,848	8,167
Lanark	5,752	1,559	2,499	9,810	9,844	9,151	9,803	8,273
Totals	56,034	19,036	30,158	105,228	102,938	96,889	103,868	93,028
Victoria	6,267	2,165	3,355	11,787	12,249	11,184	13,173	10,953
Peterborough	5,448	1,548	2,634	9,630	10,307	9,015	9,170	9,184
Haliburton	540	123	144	807	876	793	851	969
Hastings	9,183	2,355	4,304	15,842	15,616	16,420	16,569	15,897
Totals	21,438	6,191	10,437	38,066	39,048	37,412	39,763	37,003
Muskoka	1,123	421	439	1,983	1,893	1,725	1,644	1,312
Parry Sound	454	180	204	838	863	981	887	446
Algoma	566	293	361	1,220	1,067	791	1,187	921
Totals	2,143	894	1,004	4,041	3,823	3,497	3,718	2,679
The Province 1886	300,682	107,000	161,967	569,649	.....	.....	.....	.....
The Province 1885	311,587	95,963	151,259	.....	558,809	.....	.....	.....
The Province 1884	303,474	93,910	138,569	.....	.....	535,953	.....	.....
The Province 1883	349,552	87,380	123,201	.....	.....	.....	560,133	.....
The Province 1882	336,932	70,596	96,076	.....	.....	.....	.....	503,604

CATTLE.

TABLE No. II.—Showing by County Municipalities and groups of Counties the number of Oxen, Milch Cows, Store Cattle and young and other Cattle in Ontario in 1886; also the totals for the five years 1882-6.

Counties.	Working Oxen.	Milch Cows.	Store Cattle over two years.	Young and other Cattle.	Totals.				
					1886.	1885.	1884.	1883.	1882.
Essex	329	12,202	7,453	15,360	35,344	33,859	33,626	30,247	25,292
Kent	172	19,094	13,584	26,971	59,821	56,699	54,511	53,504	43,949
Elgin	323	16,555	11,593	22,224	50,695	48,744	48,423	48,021	46,167
Norfolk	618	14,545	5,923	14,600	35,686	36,666	34,725	33,742	30,250
Haldimand	133	12,917	6,581	15,983	35,614	32,626	31,121	27,959	24,424
Welland	319	9,060	3,220	9,424	22,023	21,548	19,610	19,586	17,133
Totals	1,894	84,373	48,354	104,562	239,183	230,142	222,016	213,059	187,215
Lambton	52	17,180	13,727	26,848	57,807	55,626	61,236	52,637	47,791
Huron	381	30,910	27,845	48,679	107,815	107,070	104,649	100,888	81,804
Bruce	879	25,186	20,169	38,775	85,009	81,604	80,870	78,822	61,313
Totals	1,312	73,276	61,741	114,302	250,631	244,300	246,755	232,347	190,908
Grey	1,785	31,570	25,492	47,132	105,979	105,615	105,762	97,797	84,336
Simcoe	787	22,996	17,524	31,010	72,317	73,458	70,702	66,464	55,726
Totals	2,572	54,566	43,016	78,142	178,296	179,073	176,464	164,261	140,062
Middlesex	63	35,426	33,680	48,228	117,397	113,183	113,868	104,803	96,448
Oxford	133	32,964	13,544	26,887	73,528	71,871	70,388	69,872	62,233
Brant	53	10,236	5,921	12,708	28,918	27,307	25,529	23,845	21,859
Perth	87	24,593	19,289	34,513	78,482	79,491	76,413	73,411	60,730
Wellington	341	25,662	17,627	36,846	80,476	78,555	78,100	72,987	66,181
Waterloo	85	13,874	6,243	18,118	38,320	36,992	36,655	34,789	32,305
Dufferin	342	9,040	7,699	13,727	30,808	31,408	30,932	28,042	24,548
Totals	1,104	151,795	104,003	191,027	447,929	438,807	431,885	407,749	364,304
Lincoln	221	9,062	2,546	9,622	21,451	21,194	19,319	19,479	16,254
Wentworth	153	13,777	5,905	14,292	34,127	32,748	31,362	29,493	25,968
Halton	235	9,461	7,275	12,403	29,374	29,488	27,070	24,379	22,351
Peel	34	12,119	7,968	13,602	33,723	31,328	30,351	26,681	24,171
York	120	20,562	10,033	20,110	50,825	51,029	47,425	45,662	40,405
Ontario	120	16,039	11,152	24,673	51,984	50,007	50,911	47,911	42,675
Durham	178	12,618	9,172	17,376	39,344	36,574	37,264	34,173	32,490
Northum'land.	404	18,612	7,977	17,375	44,368	44,893	42,638	40,109	31,801
Prince Edw'd.	48	9,920	2,984	8,603	21,555	19,041	17,335	16,326	14,726
Totals	1,513	122,170	65,012	138,056	326,751	316,302	303,675	284,213	250,841
Lennox & Ad.	308	14,789	7,266	12,774	35,137	32,290	29,256	25,747	24,417
Frontenac	291	16,199	5,828	14,529	36,847	30,682	31,177	30,687	32,174
Leeds & Gren.	163	42,916	10,727	25,093	78,899	75,989	74,680	70,973	61,972
Dundas	44	16,698	2,972	9,574	29,288	28,460	26,512	26,265	21,692
Stormont	38	14,809	2,776	7,405	25,028	26,659	22,842	23,157	20,464
Glengarry	15	16,985	3,132	10,632	30,764	32,525	30,912	29,744	27,289
Prescott	44	11,726	3,164	8,339	23,273	23,893	20,819	19,434	17,399
Russell	24	6,975	2,611	6,345	15,955	16,764	15,627	16,347	10,395
Carleton	81	20,439	10,362	17,935	48,817	45,176	45,133	43,468	37,743
Renfrew	211	15,729	9,032	18,073	43,045	44,665	42,468	44,383	34,303
Lanark	71	18,558	8,488	18,006	45,123	43,983	44,789	41,377	35,542
Totals	1,290	195,823	66,358	148,705	412,176	401,086	384,215	371,582	323,390
Victoria	262	12,689	8,373	16,087	37,411	40,710	37,014	34,631	28,998
Peterborough	545	12,608	6,898	13,665	33,716	36,640	32,735	31,145	27,010
Haliburton	399	2,055	927	2,920	6,301	6,499	6,246	5,711	6,322
Hastings	1,401	29,899	8,875	20,388	60,563	56,089	59,052	59,967	53,052
Totals	2,607	57,251	25,073	53,060	137,991	139,938	135,047	131,454	115,382
Muskoka	961	4,177	2,413	5,303	12,854	13,651	13,437	11,032	7,356
Parry Sound	501	1,483	825	2,304	5,113	6,131	6,435	6,761	3,233
Algoma	660	1,983	1,284	3,322	7,249	7,050	5,741	6,155	3,621
Totals	2,122	7,643	4,522	10,929	25,216	26,832	25,613	23,948	14,210
The Province. 1886	14,414	746,897	418,079	838,783	2,018,173				
1885	15,302	750,005	373,856	837,317		1,976,480			
1884	16,793	710,519	384,453	813,905			1,925,670		
1883	17,071	690,437	321,471	799,634				1,828,613	
1882	14,566	669,629	272,208	629,909					1,586,312

SHEEP.

TABLE No. III.—Showing by County Municipalities and groups of Counties the number of Coarse and Fine Woolled Sheep in Ontario in 1886; also the totals for the five years 1882-6.

Counties.	Coarse Woolled.		Fine Woolled.		Totals.				
	Over 1 year.	Under 1 year.	Over 1 year.	Under 1 year.	1886.	1885.	1884.	1883.	1882.
Essex	13,248	7,996	3,443	2,839	27,526	25,879	24,074	22,537	21,124
Kent	14,930	10,050	4,320	3,169	32,469	36,706	37,428	40,875	39,951
Elgin	13,861	9,383	3,763	3,061	30,068	34,854	46,753	44,957	50,432
Norfolk	11,191	7,424	5,037	3,525	27,177	28,875	32,997	34,397	36,680
Haldimand	13,596	10,009	3,726	2,614	29,945	32,809	38,545	35,797	36,559
Welland	8,531	5,344	5,907	4,271	24,053	27,595	25,735	23,769	23,325
Totals	75,357	50,206	26,196	19,479	171,238	186,718	205,532	202,382	208,071
Lambton	17,135	12,443	3,569	3,197	36,344	41,316	55,462	49,751	55,778
Huron	39,616	26,657	7,570	5,480	79,323	85,677	97,356	98,200	96,400
Bruce	40,544	24,988	6,289	4,288	76,109	83,190	86,176	86,538	84,705
Totals	97,295	64,088	17,428	12,965	191,776	210,183	238,994	234,489	236,883
Grey	58,504	36,050	10,482	6,748	111,784	122,431	130,775	119,132	118,210
Simcoe	37,740	21,515	10,909	7,457	77,621	84,882	82,709	73,758	70,260
Totals	96,244	57,565	21,391	14,205	189,405	207,313	213,484	192,890	188,470
Middlesex	25,966	17,258	5,410	3,558	52,192	61,468	72,194	81,563	92,616
Oxford	11,298	7,771	5,944	3,910	28,923	34,145	40,333	44,461	52,096
Brant	9,881	6,616	3,823	2,826	23,146	26,763	27,352	29,447	34,467
Perth	27,054	19,310	4,512	3,533	54,409	56,217	63,599	68,271	72,905
Wellington	37,422	23,308	9,228	6,041	75,999	87,412	94,515	88,367	87,097
Waterloo	15,204	8,895	6,783	4,792	35,674	40,722	40,601	42,204	44,982
Dufferin	15,414	9,821	2,772	1,799	29,806	36,282	35,204	30,526	30,899
Totals	142,239	92,979	38,472	26,459	300,149	343,009	373,798	384,839	415,062
Lincoln	7,773	5,311	3,198	2,637	18,919	18,241	19,304	20,273	20,634
Wentworth	11,958	7,312	3,297	2,420	24,987	25,648	28,605	30,435	31,026
Halton	9,720	5,689	1,837	1,611	18,857	21,099	22,795	21,470	24,073
Peel	13,408	8,687	3,414	2,340	27,849	26,676	29,412	27,937	31,113
York	19,020	11,099	10,114	6,830	47,063	51,871	49,438	52,031	55,861
Ontario	18,577	10,164	9,390	6,644	44,775	45,788	50,394	49,966	50,202
Durham	18,238	9,934	2,862	2,409	33,443	34,338	40,159	36,948	39,957
Northum'd	16,998	9,842	3,550	2,197	32,587	38,785	39,738	36,217	38,747
Prince Ed	6,153	3,465	3,891	1,582	15,091	15,529	17,638	19,727	21,464
Totals	121,845	71,503	41,553	28,670	263,571	277,975	297,483	295,004	313,077
Lennox & A	14,041	8,105	4,665	2,227	29,038	27,070	27,732	29,577	31,030
Frontenac	14,924	9,413	4,579	3,306	32,222	34,180	33,051	36,229	42,834
Leeds & G	31,865	18,575	7,779	4,706	62,925	66,677	75,681	76,498	76,537
Dundas	9,016	5,518	2,463	1,821	18,818	20,104	20,691	25,239	21,737
Stormont	7,810	3,910	2,472	879	15,071	16,464	15,501	18,506	18,756
Glengarry	12,806	4,180	3,650	1,697	22,333	25,716	25,117	27,970	30,942
Prescott	9,590	5,478	2,115	930	18,113	21,840	21,039	20,046	19,710
Russell	8,170	4,594	1,577	714	15,055	14,094	15,655	15,839	12,376
Carleton	25,145	11,993	6,131	3,468	46,737	44,035	56,018	53,160	61,256
Renfrew	29,594	15,215	6,825	3,745	55,379	57,427	67,827	59,480	52,442
Lanark	29,414	17,195	4,808	2,743	54,160	60,078	63,160	61,473	55,353
Totals	192,375	104,176	47,064	26,236	369,851	387,685	421,472	424,017	422,973
Victoria	17,765	10,499	3,393	2,701	34,358	38,624	40,313	36,596	36,532
Peterboro	14,615	7,143	1,694	873	24,325	31,881	32,378	30,565	30,765
Haliburton	1,943	1,094	713	372	4,122	7,262	5,636	4,830	5,215
Hastings	22,334	12,139	5,371	3,015	42,859	45,851	43,775	47,441	48,953
Totals	56,657	30,875	11,171	6,961	105,664	123,618	122,102	119,432	121,465
Muskoka	4,620	2,709	1,500	1,085	9,914	10,314	10,500	8,960	5,986
Parry Sound	1,294	740	797	362	3,193	3,952	3,557	2,659	1,263
Algoma	2,726	2,129	799	534	6,188	4,838	3,811	4,112	2,053
Totals	8,640	5,578	3,096	1,981	19,295	19,104	17,868	15,731	9,302
The Province 1886	790,652	476,970	206,371	136,956	1,610,949	.....	.....	.....	.....
The Province 1885	908,762	547,952	176,248	122,643	.....	1,755,605	.....	.....	.....
The Province 1884	994,608	595,996	176,341	123,788	.....	.....	1,890,733	.....	.....
The Province 1883	1,043,080	580,095	150,281	95,328	.....	.....	.....	1,868,784	.....
The Province 1882	933,143	676,362	178,299	127,499	.....	.....	.....	.....	1,915,303

PIGS.

TABLE No. IV.—Showing by County Municipalities and groups of Counties the number of Pigs (over and under 1 year) in Ontario in 1886; also the totals for the five years 1882-6.

Counties.	1886.		Totals.				
	Over 1 Year.	Under 1 Year.	1886.	1885.	1884.	1883.	1882.
Essex	11,904	35,520	47,424	44,061	43,069	43,328	36,598
Kent	10,716	39,996	50,712	42,515	40,687	44,485	36,062
Elgin	6,893	25,939	32,832	26,450	26,839	32,752	31,002
Norfolk	4,446	18,557	23,003	22,381	23,851	24,404	24,502
Haldimand	3,745	14,839	18,584	16,858	17,736	16,653	15,828
Welland	1,829	8,974	10,803	10,737	11,269	11,498	12,760
Totals	39,533	143,825	183,358	163,002	163,451	173,120	156,752
Lambton	4,192	15,067	19,259	16,944	20,251	18,548	17,084
Huron	6,321	21,396	27,717	28,675	37,151	34,264	29,269
Bruce	5,576	17,390	22,966	24,090	30,119	29,012	27,688
Totals	16,089	53,853	69,942	69,709	87,521	81,824	74,041
Grey	8,038	28,409	36,447	35,275	44,594	40,279	36,999
Simcoe	10,826	28,920	39,746	42,488	47,117	42,553	41,055
Totals	18,864	57,329	76,193	77,763	91,711	82,832	78,054
Middlesex	7,864	32,010	39,874	35,147	39,395	42,941	39,456
Oxford	5,918	23,662	29,580	25,858	27,121	31,320	30,680
Brant	2,249	10,628	12,877	13,223	15,946	13,930	15,003
Perth	5,892	17,613	23,505	21,133	25,201	25,509	24,226
Wellington	6,087	24,463	30,550	29,947	35,532	32,515	31,451
Waterloo	2,571	12,965	15,536	15,507	18,681	16,232	14,956
Dufferin	3,676	10,404	14,080	14,952	16,879	14,603	14,461
Totals	34,257	131,745	166,002	155,767	178,755	177,050	170,213
Lincoln	2,277	11,858	14,135	13,179	12,850	13,088	12,540
Wentworth	3,418	13,398	16,816	15,908	18,388	19,529	18,796
Halton	2,165	8,862	11,027	11,603	12,711	11,315	12,565
Peel	3,835	16,966	20,801	19,866	20,456	19,007	17,451
York	6,228	32,339	38,567	34,850	38,002	35,856	35,543
Ontario	6,179	20,124	26,303	24,894	26,631	27,034	26,152
Durham	4,130	12,717	16,847	17,596	23,116	18,813	19,568
Northumberland	5,153	12,866	18,019	19,106	20,992	20,377	19,698
Prince Edward	1,782	5,717	7,499	6,931	8,372	7,719	6,848
Totals	35,167	134,847	170,014	163,933	181,518	172,738	169,161
Lennox and Addington	2,829	5,426	8,255	8,715	10,179	9,476	9,028
Frontenac	2,756	5,978	8,734	8,229	9,396	9,868	10,260
Leeds and Grenville	7,829	14,513	22,342	20,686	23,085	25,260	23,066
Dundas	3,427	6,715	10,142	9,600	10,332	11,960	9,402
Stormont	2,857	6,084	8,941	7,217	7,829	8,807	8,307
Glengarry	2,790	6,322	9,112	9,484	9,145	10,136	9,801
Prescott	3,873	6,292	10,165	10,130	8,942	10,578	10,064
Russell	2,609	4,308	6,917	7,363	8,015	7,531	5,714
Carleton	6,669	16,102	22,771	19,843	22,071	20,614	21,110
Renfrew	6,472	9,235	15,707	17,077	16,954	17,448	15,741
Lanark	4,580	9,597	14,177	13,810	14,217	14,777	12,733
Totals	46,691	90,572	137,263	132,154	140,165	146,455	135,226
Victoria	4,502	11,945	16,447	17,235	19,044	19,415	18,153
Peterborough	4,400	9,213	13,613	14,449	17,259	15,148	17,251
Haliburton	558	1,279	1,837	1,504	1,716	1,952	2,187
Hastings	5,719	12,711	18,430	18,230	22,824	25,721	23,436
Totals	15,179	35,148	50,327	51,418	60,843	62,236	61,027
Muskoka	522	1,897	2,419	3,052	4,236	3,415	2,497
Parry Sound	415	1,422	1,837	1,808	3,505	3,180	1,465
Algoma	770	2,000	2,770	3,656	4,453	3,877	1,790
Totals	1,707	5,319	7,026	8,516	12,194	10,472	5,752
The Province 1886	207,487	652,638	860,125				
The Province 1885	225,512	596,750		822,262			
The Province 1884	257,711	658,447			916,158		
The Province 1883	245,996	660,731				906,727	
The Province 1882	252,415	597,811					850,226

POULTRY.

TABLE No. V.—Showing by County Municipalities and groups of Counties the number of Turkeys, Geese and other Fowls in Ontario in 1886; also the totals of Poultry for the five years 1882-6.

Counties.	Turkeys.	Geese.	Other Fowls	Totals.				
				1886.	1885.	1884.	1883.	1882.
Essex	12,911	16,059	168,545	197,515	205,417	161,895	158,295	127,020
Kent	18,869	13,313	188,389	220,571	214,911	168,862	184,731	156,697
Elgin	17,887	7,429	162,851	188,167	157,556	137,544	140,703	130,234
Norfolk	12,189	5,689	129,326	147,204	143,150	137,773	133,465	131,440
Haldimand	12,601	8,152	115,130	135,883	118,227	114,894	94,868	95,522
Welland	12,346	5,664	100,615	118,625	103,616	104,009	88,737	93,261
Totals	86,803	56,306	864,856	1,007,965	942,877	824,977	800,799	734,174
Lambton	12,653	10,904	152,781	176,338	138,032	149,575	123,542	110,437
Huron	13,030	23,727	300,273	337,030	314,705	307,845	289,144	245,101
Bruce	8,707	18,357	199,625	226,689	202,718	213,713	204,013	178,819
Totals	34,390	52,988	652,679	740,057	655,455	671,133	616,699	534,357
Grey	16,842	27,834	255,381	300,057	272,483	269,909	250,741	231,413
Simcoe	19,963	28,320	231,339	279,622	251,944	255,635	225,232	208,531
Totals	36,805	56,154	486,720	579,679	524,427	525,544	475,973	439,944
Middlesex	28,948	20,519	305,855	355,322	322,300	277,276	269,904	274,652
Oxford	12,440	8,948	178,528	199,916	187,528	169,649	176,102	161,062
Brant	6,977	4,597	86,178	97,752	88,487	90,254	82,276	81,206
Perth	11,641	18,494	207,284	237,419	230,743	240,553	213,370	177,235
Wellington	13,059	19,750	204,609	237,418	226,363	229,880	214,898	188,852
Waterloo	4,183	5,148	130,423	139,754	126,247	120,684	114,951	108,990
Dufferin	8,051	13,227	88,230	109,508	102,369	104,562	85,474	81,815
Totals	85,299	90,683	1,201,107	1,377,089	1,284,037	1,232,858	1,156,975	1,073,812
Lincoln	8,578	4,546	86,666	99,790	95,762	82,295	80,449	77,304
Wentworth	10,441	6,182	106,655	123,278	109,908	105,890	108,881	100,186
Halton	9,273	9,606	80,046	98,925	84,716	88,247	78,328	85,498
Peel	15,518	14,664	117,523	147,705	144,392	154,423	123,957	116,861
York	21,737	20,102	213,131	254,970	225,005	213,763	203,281	198,585
Ontario	12,310	14,647	159,091	186,048	173,517	181,040	163,474	169,173
Durham	17,992	17,277	147,859	183,128	149,397	149,598	135,829	134,844
Northumberland	9,682	9,580	150,751	170,013	155,942	162,941	146,323	133,491
Prince Edward	4,299	3,972	99,569	107,840	95,951	95,982	91,550	82,759
Totals	109,830	100,576	1,161,291	1,371,697	1,234,590	1,234,179	1,132,072	1,098,701
Lennox & Addington	3,368	6,893	86,312	96,573	88,994	90,848	84,848	86,822
Frontenac	7,273	7,085	90,874	105,232	86,289	92,698	80,301	87,359
Leeds and Grenville	36,331	15,661	196,595	248,587	224,576	237,399	222,636	186,124
Dundas	7,543	6,286	108,834	122,663	119,231	113,029	113,253	90,921
Stormont	5,006	4,305	88,466	97,777	83,332	78,906	86,023	83,974
Glengarry	2,265	5,980	86,562	94,807	85,150	87,214	82,294	82,438
Prescott	4,013	4,228	59,933	68,174	66,981	62,073	63,989	55,729
Russell	6,209	2,869	46,814	55,892	54,361	52,584	52,869	32,595
Carleton	36,945	19,668	171,966	228,579	182,810	195,894	163,655	157,754
Renfrew	11,073	9,588	98,475	119,136	103,005	105,805	108,638	82,598
Lanark	21,259	11,538	123,784	156,581	153,172	149,764	134,849	100,355
Totals	141,285	94,101	1,158,615	1,394,001	1,247,901	1,266,214	1,193,355	1,046,869
Victoria	7,952	12,203	109,324	129,479	114,436	127,845	112,245	105,006
Peterborough	8,229	12,459	103,957	124,645	119,991	118,209	105,148	99,397
Haliburton	795	1,021	11,738	13,554	13,199	12,747	12,326	13,807
Hastings	7,075	13,448	145,589	166,112	142,646	154,462	182,777	167,001
Totals	24,051	39,131	370,608	433,790	390,272	413,263	412,496	385,211
Muskoka	2,226	1,399	28,550	32,175	24,344	32,244	23,556	20,051
Parry Sound	938	585	10,906	12,429	11,666	19,370	17,843	9,735
Algoma	1,087	1,833	17,113	20,033	21,236	17,824	17,576	9,266
Totals	4,251	3,817	56,569	64,637	57,246	69,438	58,975	39,052
The Province. 1886	522,714	493,756	5,952,445	6,968,915				
1885	428,233	476,942	5,431,630		6,336,802			
1884	445,532	540,130	5,251,944			6,237,604		
1883	355,635	491,093	5,000,616				5,847,344	
1882	310,058	533,357	4,508,705					5,352,120

RATIOS OF LIVE STOCK.

TABLE No. VI.—Showing by County Municipalities and groups of Counties the number of Live Stock in Ontario in the year 1886, per 1,000 acres of cleared land; also the values of Live Stock per 1,000 acres of cleared land in the years 1885 and 1886, with the annual average of the five years 1882-6.

Counties.	Horses.	Cattle.	Sheep.	Pigs.	Poultry.	Value of Live Stock.		
						1886.	1885.	1882-6.
						$	$	$
Essex	78.1	192.2	149.7	257.8	1073.9	12,013	11,164	11,259
Kent	67.5	218.6	118.7	185.3	806.1	11,790	10,818	10,721
Elgin	52.9	193.6	114.8	125.4	718.5	10,326	9,847	10,228
Norfolk	51.9	159.7	121.6	102.9	658.7	8,571	8,376	8,142
Haldimand	54.5	179.9	151.3	93.9	686.5	9,879	9,310	8,891
Welland	56.9	141.1	154.1	69.2	760.2	9,063	8,753	8,425
Group	60.1	184.4	132.0	141.4	777.2	10,351	9,771	9,694
Lambton	53.5	229.3	144.1	76.4	699.4	10,974	10,463	10,963
Huron	51.4	206.5	152.0	53.1	645.6	10,849	10,584	10,432
Bruce	46.3	201.3	180.2	54.4	536.8	9,560	9,476	9,229
Group	50.0	209.5	160.3	58.5	618.5	10,420	10,174	10,125
Grey	45.6	203.2	214.3	69.9	575.3	9,187	9,183	8,882
Simcoe	52.4	164.7	176.7	90.5	636.7	9,564	9,339	9,057
Group	48.7	185.6	197.2	79.3	603.4	9,359	9,253	8,963
Middlesex	52.4	234.3	104.2	79.6	709.1	12,597	11,602	11,950
Oxford	51.5	220.0	86.5	88.5	598.1	11,356	11,035	10,855
Brant	55.8	172.1	137.7	76.6	581.7	10,459	10,029	9,483
Perth	50.8	224.1	155.3	67.1	677.8	11,121	10,728	10,951
Wellington	48.7	188.2	177.7	71.4	555.2	10,153	9,869	9,868
Waterloo	52.2	165.2	153.8	67.0	602.5	9,877	9,395	9,462
Dufferin	44.2	173.5	167.8	79.3	616.6	8,531	8,705	8,555
Group	50.9	204.5	137.0	75.8	628.6	10,913	10,454	10,493
Lincoln	61.6	143.7	126.8	94.7	668.6	10,121	9,246	9,148
Wentworth	58.9	168.1	123.1	82.8	607.3	10,984	9,666	9,789
Halton	52.7	177.0	113.6	66.4	596.1	10,393	9,657	9,471
Peel	51.4	146.1	120.7	90.1	639.9	9,658	9,109	8,925
York	59.6	125.9	116.6	95.5	631.6	10,380	9,987	9,764
Ontario	55.0	158.6	136.6	80.3	567.6	11,132	10,561	10,172
Durham	56.0	145.4	123.6	62.3	676.7	9,441	8,958	8,670
Northumberland	54.0	143.6	105.5	58.3	550.3	8,546	7,802	7,780
Prince Edward	58.1	119.1	83.4	41.4	595.7	8,230	6,892	7,009
Group	56.3	145.8	117.6	75.9	612.1	9,914	9,212	9,059
Lennox and Addington	50.7	175.6	145.1	41.3	482.6	8,363	6,775	7,133
Frontenac	48.6	185.5	162.2	44.0	529.8	8,045	6,587	7,108
Leeds and Grenville	45.7	196.0	156.3	55.5	617.4	8,240	7,469	7,746
Dundas	56.9	218.0	140.1	75.5	913.0	9,963	8,895	9,266
Stormont	59.5	223.5	134.6	79.8	873.0	10,359	9,135	9,214
Glengarry	60.8	226.5	164.4	67.1	698.0	10,432	9,287	9,523
Prescott	52.4	186.9	145.4	81.6	547.4	8,616	9,040	8,267
Russell	58.6	214.9	202.8	93.2	752.8	9,734	10,162	9,621
Carleton	51.1	187.2	179.3	87.3	876.8	9,626	8,545	8,834
Renfrew	43.5	179.4	230.8	65.5	496.6	7,869	7,195	7,319
Lanark	35.0	161.2	193.4	50.6	559.2	6,839	6,352	6,369
Group	48.7	190.6	171.0	68.5	644.5	8,605	7,753	7,914
Victoria	50.7	160.9	147.8	70.8	557.0	8,592	8,709	8,401
Peterborough	45.5	159.4	115.0	64.3	589.2	7,568	7,875	7,571
Haliburton	32.0	249.7	163.4	72.8	537.2	7,993	8,347	8,012
Hastings	49.9	190.9	135.1	58.1	523.5	8,482	8,011	7,972
Group	48.4	175.4	134.3	64.0	551.5	8,253	8,188	7,993
Muskoka	39.3	254.5	196.3	47.9	637.0	10,647	9,701	10,031
Parry Sound	39.1	238.6	149.0	85.7	579.9	10,705	9,178	9,612
Algoma	39.2	233.2	199.0	89.1	644.4	10,500	10,172	11,151
Group	39.2	244.7	187.3	68.2	627.4	10,615	9,691	10,233
The Province 1886	52.1	184.5	147.3	78.6	637.1	9,801	.....	.....
The Province 1885	51.5	182.1	161.7	75.7	583.7	.....	9,275	.....
The Province 1882-6	51.2	175.3	169.8	81.8	577.4	.....	.....	9,233

WOOL.

TABLE No. VII.—Showing by County Municipalities and groups of Counties the clip of Coarse Wool in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average number of pounds per fleece.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Fleeces.	Pounds.	Lbs. per fleece.	Fleeces.	Pounds.	Lbs. per fleece.	Fleeces.	Pounds.	Lbs. per fleece.
Essex	13,463	78,566	5.84	12,432	69,290	5.57	12,789	71,034	5.55
Kent	15,532	89,788	5.78	19,869	118,168	5.95	19,536	111,190	5.69
Elgin	14,215	77,296	5.44	17,326	99,396	5.74	21,726	121,627	5.60
Norfolk	11,582	63,356	5.47	13,371	71,973	5.38	15,253	81,621	5.35
Haldimand	14,087	91,462	6.49	15,509	97,099	6.26	17,203	104,759	6.09
Welland	8,924	47,013	5.27	11,106	60,930	5.49	10,980	57,972	5.28
Totals	77,803	447,481	5.75	89,613	516,856	5.77	97,487	548,203	5.62
Lambton	17,808	107,267	6.02	22,595	133,264	5.90	25,509	147,690	5.79
Huron	40,314	225,331	5.59	47,064	268,456	5.70	48,891	276,664	5.66
Bruce	41,611	235,775	5.67	45,027	256,297	5.69	44,366	250,151	5.64
Totals	99,733	568,373	5.70	114,686	658,017	5.74	118,766	674,505	5.68
Grey	60,454	330,631	5.47	71,271	397,703	5.58	65,859	359,461	5.46
Simcoe	38,570	220,216	5.71	46,458	272,064	5.86	41,487	228,669	5.51
Totals	99,024	550,847	5.56	117,729	669,767	5.69	107,346	588,130	5.48
Middlesex	27,119	167,361	6.17	32,740	195,271	5 96	39,491	232,323	5.88
Oxford	11,483	66,986	5.83	16,061	93,365	5.81	20,309	117,278	5.77
Brant	10,048	58,085	5.78	12,389	74,654	6.03	14,004	81,055	5.79
Perth	27,730	156,157	5.63	30,557	173,872	5.69	32,758	183,142	5.59
Wellington	38,045	222,131	5.84	44,830	265,439	5.92	45,651	261,362	5.73
Waterloo	15,675	84,180	5.37	19,827	108,707	5.48	20,487	112,882	5.51
Dufferin	15,856	86,063	5.43	20,491	112,058	5.47	17,596	97,887	5.56
Totals	145,956	840,963	5.76	176,895	1,023,306	5.78	190,296	1,085,929	5.71
Lincoln	7,914	41,914	5.30	7,638	41,615	5.45	8,921	46,608	5.22
Wentworth	12,364	71,174	5.76	12,234	72,929	5.96	14,471	81,931	5.66
Halton	9,962	62,434	6.27	10,902	70,756	6.49	11,748	74,042	6.30
Peel	13,936	91,842	6.59	14,595	97,717	6.69	15,710	103,932	6.62
York	19,720	126,051	6.39	24,856	154,200	6.20	25,468	155,866	6.12
Ontario	19,394	123,909	6.39	20,824	136,443	6.65	23,928	150,366	6.28
Durham	18,940	111,049	5.86	19,646	117,647	5.99	21,139	122,868	5.81
Northumberland	17,636	99,344	5.63	22,228	128,258	5.77	20,501	115,958	5.66
Prince Edward	6,180	33,129	5.36	7,801	41,471	5.32	8,297	44,794	5.40
Totals	126,046	760,846	6.04	140,724	861,036	6.12	150,183	896,365	5.97
Lennox and Addington	14,496	76,761	5.30	13,832	74,699	5.40	14,462	74,769	5.17
Frontenac	15,937	78,321	4.91	17,444	91,258	5.23	18,449	89,469	4.85
Leeds and Grenville	32,186	154,438	4.80	34,033	171,029	5.03	35,492	170,734	4.81
Dundas	9,114	45,929	5.04	10,825	53,574	4.95	10,695	52,733	4.93
Stormont	7,721	39,176	5.07	8,731	43,749	5.01	8,599	42,754	4.97
Glengarry	12,731	61,168	4.80	14,310	66,059	4.62	14,427	65,892	4.57
Prescott	9,672	46,658	4.82	11,565	56,522	4.89	9,653	45,176	4.68
Russell	8,370	39,384	4.71	7,292	35,139	4.82	7,579	35,313	4.66
Carleton	25,853	130,909	5.06	22,406	114,567	5.11	27,512	135,982	4.94
Renfrew	30,590	138,862	4.54	33,146	144,012	4.34	32,405	142,033	4.38
Lanark	30,168	146,954	4.87	35,398	172,959	4.89	33,803	160,622	4.75
Totals	196,838	958,560	4.87	208,982	1,023,567	4.90	213,076	1,015,477	4.77
Victoria	18,398	103,210	5.61	20,334	110,726	5.45	20,429	111,548	5.46
Peterborough	15,041	80,441	5.35	18,681	100,909	5.40	17,351	91,852	5.29
Haliburton	1,975	9,737	4.93	3,115	15,747	5.06	2,446	11,849	4.84
Hastings	22,758	110,800	4.87	24,037	122,897	5.11	23,253	113,472	4.88
Totals	58,172	304,188	5.23	66,167	350,279	5.29	63,479	328,721	5.18
Muskoka	4,686	24,996	5.33	5,361	28,941	5.40	4,516	24,365	5.40
Parry Sound	1,382	8,162	5.91	2,170	12,185	5.62	1,359	8,085	5.95
Algoma	2,810	16,507	5.87	2,987	18,021	6.03	2,129	12,676	5.95
Totals	8,878	49,665	5.59	10,518	59,147	5.62	8,004	45,126	5.64
The Province	812,450	4,480,923	5.52	925,314	5,161,975	5.58	948,637	5,182,456	5.46

WOOL.

TABLE No. VIII.—Showing by County Municipalities and groups of Counties the clip of Fine Wool in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average number of pounds per fleece.

Counties.	1886.			1885.			Yearly average for the five years 1882-6.		
	Fleeces.	Pounds.	Lbs. per fleece.	Fleeces.	Pounds.	Lbs. per fleece.	Fleeces.	Pounds.	Lbs. per fleece.
Essex	3,426	17,180	5.01	3,087	16,268	5.27	2,283	11,613	5.09
Kent	4,439	23,363	5.26	3,480	16,780	4.82	3,916	20,017	5.11
Elgin	3,829	19,400	5.07	3,107	16,152	5.20	3,573	18,791	5.26
Norfolk	5,134	24,064	4.69	4,407	22,058	5.01	4,366	20,776	4.76
Haldimand	3,714	18,401	4.95	4,006	20,659	5.16	3,707	18,163	4.90
Welland	6,068	27,718	4.57	6,074	26,676	4.39	4,549	20,559	4.52
Totals	26,610	130,126	4.89	24,161	118,593	4.91	22,394	109,919	4.91
Lambton	3,830	20,528	5.36	2,782	14,492	5.21	3,651	19,331	5.29
Huron	7,740	39,381	5.09	6,273	33,207	5.29	6,069	32,059	5.28
Bruce	6,602	34,632	5.25	7,050	38,349	5.44	6,636	35,813	5.40
Totals	18,172	94,541	5.20	16,105	86,048	5.34	16,356	87,203	5.33
Grey	10,697	54,292	5.08	7,604	38,678	5.09	9,109	47,223	5.18
Simcoe	11,030	53,725	4.87	7,955	41,622	5.23	7,671	39,291	5.12
Totals	21,727	108,017	4.97	15,559	80,300	5.16	16,780	86,514	5.16
Middlesex	5,608	31,277	5.58	5,010	28,359	5.66	5,166	28,728	5.56
Oxford	5,971	32,642	5.47	4,829	25,445	5.27	4,103	21,851	5.33
Brant	3,894	19,562	5.02	3,865	20,465	5.29	3,222	17,237	5.35
Perth	4,568	24,628	5.39	3,482	18,851	5.41	4,330	23,362	5.40
Wellington	9,549	49,497	5.18	8,655	43,407	5.02	7,689	39,776	5.17
Waterloo	6,929	36,321	5.24	5,929	29,771	5.02	4,883	24,095	4.93
Dufferin	2,863	16,003	5.59	1,578	8,523	5.40	2,330	12,759	5.48
Totals	39,382	209,930	5.33	33,348	174,821	5.24	31,723	167,808	5.29
Lincoln	3,328	17,118	5.14	3,284	16,783	5.11	2,949	14,531	4.93
Wentworth	3,327	16,872	5.07	3,216	16,163	5.03	2,944	14,744	5.01
Halton	1,815	9,627	5.30	2,173	11,628	5.35	1,729	9,399	5.44
Peel	3,521	19,714	5.60	2,043	11,114	5.44	1,938	10,691	5.47
York	10,740	55,644	5.18	8,131	45,634	5.61	6,647	35,732	5.38
Ontario	9,768	53,253	5.45	8,132	45,048	5.54	6,809	37,771	5.55
Durham	2,902	15,088	5.20	2,396	14,848	6.20	2,473	14,006	5.66
Northumberland	3,553	19,278	5.43	2,064	10,630	5.15	2,747	14,726	5.36
Prince Edward	4,087	21,015	5.14	2,354	11,642	4.95	3,081	15,476	5.02
Totals	43,041	227,609	5.29	33,793	183,490	5.43	31,317	166,986	5.33
Lennox & Addington	4,857	23,243	4.79	2,573	13,091	5.09	3,662	18,319	5.00
Frontenac	4,605	23,619	5.13	3,261	17,098	5.24	3,866	19,332	5.00
Leeds & Grenville	8,030	39,548	4.93	7,822	40,022	5.12	9,104	44,928	4.93
Dundas	2,641	12,836	4.86	2,107	10,165	4.82	2,774	13,300	4.79
Stormont	2,568	12,457	4.85	2,281	11,613	5.09	2,657	13,411	5.05
Glengarry	3,718	16,953	4.56	3,783	18,388	4.86	4,035	19,018	4.71
Prescott	2,100	9,754	4.64	2,437	12,651	5.19	2,701	13,148	4.87
Russell	1,577	7,618	4.83	1,758	9,196	5.23	1,745	8,616	4.94
Carleton	6,144	29,091	4.73	5,716	28,721	5.02	5,505	27,015	4.91
Renfrew	7,103	30,682	4.32	5,762	24,894	4.32	6,300	27,627	4.39
Lanark	4,887	22,321	4.57	3,283	15,360	4.68	3,689	17,006	4.61
Totals	48,230	228,122	4.73	40,783	201,199	4.93	46,038	221,720	4.82
Victoria	3,560	17,302	4.86	4,516	24,764	5.48	3,539	19,449	5.50
Peterborough	1,709	7,299	4.27	2,250	10,917	4.85	2,174	10,469	4.82
Haliburton	680	3,063	4.50	1,687	7,565	4.48	1,230	5,124	4.17
Hastings	5,365	24,631	4.59	5,481	25,089	4.58	6,535	30,053	4.60
Totals	11,314	52,295	4.62	13,934	68,335	4.90	13,478	65,095	4.83
Muskoka	1,575	8,098	5.14	1,606	8,238	5.13	1,314	6,752	5.14
Parry Sound	836	3,709	4.44	557	2,698	4.84	605	3,144	5.20
Algoma	814	4,497	5.52	210	1,169	5.57	515	2,654	5.15
Totals	3,225	16,304	5.06	2,373	12,105	5.10	2,434	12,550	5.16
The Province	211,701	1,066,944	5.04	180,056	924,891	5.14	180,520	917,795	5.08

WOOL.

TABLE No. IX.—Showing by County Municipalities and groups of Counties the total Clip of Wool in Ontario in the five years 1882-6, with the yearly average for the five years.

Counties.	1886.	1885.	1884.	1883.	1882.	Yearly average for the five years 1882-6.	
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Fleeces.	Pounds.
Essex	95,746	85,558	87,551	79,258	65,120	15,072	82,647
Kent	113,151	134,948	127,534	149,459	130,945	23,452	131,207
Elgin	96,696	115,548	163,734	162,154	163,959	25,299	140,418
Norfolk	87,420	94,031	109,006	117,999	103,529	19,619	102,397
Haldimand	109,863	117,758	145,337	128,978	112,675	20,910	122,922
Welland	74,731	87,606	84,198	78,385	67,735	15,529	78,531
Totals	577,607	635,449	717,360	716,233	643,963	119,881	658,122
Lambton	127,795	147,756	201,224	183,975	174,356	29,160	167,021
Huron	264,712	301,663	334,812	346,859	295,571	54,960	308,723
Bruce	270,407	294,646	305,715	309,938	249,109	51,002	285,964
Totals	662,914	744,065	841,751	840,772	719,036	135,122	761,708
Grey	384,923	436,381	445,835	413,773	352,510	74,968	406,684
Simcoe	273,941	313,686	292,498	269,319	190,354	49,158	267,960
Totals	658,864	750,067	738,333	683,092	542,864	124,126	674,644
Middlesex	198,638	223,630	267,475	313,559	301,953	44,657	261,051
Oxford	99,628	118,750	142,939	166,579	167,748	24,412	139,129
Brant	77,647	95,119	98,163	110,429	110,105	17,226	98,292
Perth	180,785	192,723	215,322	232,718	210,972	37,088	206,504
Wellington	271,628	308,846	339,207	328,514	257,494	53,340	301,138
Waterloo	120,501	138,478	144,760	141,082	140,064	25,370	136,977
Dufferin	102,066	120,581	122,155	112,282	96,146	19,926	110,646
Totals	1,050,893	1,198,127	1,330,021	1,405,163	1,284,482	222,019	1,253,737
Lincoln	59,032	58,398	61,256	65,715	61,294	11,870	61,139
Wentworth	88,046	89,092	101,877	109,327	95,030	17,415	96,675
Halton	72,061	82,384	91,559	87,790	83,501	13,477	83,441
Peel	111,556	108,831	120,066	115,490	116,724	17,648	114,533
York	181,695	199,834	182,368	203,530	190,562	32,115	191,598
Ontario	177,162	181,491	205,297	203,983	172,750	30,737	188,137
Durham	126,137	132,495	161,761	136,700	127,279	23,612	136,874
Northumberland	118,622	138,888	140,612	134,165	121,130	23,248	130,684
Prince Edward	54,144	53,113	57,840	64,484	71,773	11,378	60,270
Totals	988,455	1,044,526	1,122,636	1,121,094	1,040,043	181,500	1,063,351
Lennox and Addington	100,004	87,790	92,985	96,828	87,837	18,124	93,088
Frontenac	101,940	108,356	99,604	119,563	114,544	22,315	108,801
Leeds and Grenville	193,986	211,051	226,558	240,986	205,730	44,596	215,662
Dundas	58,765	63,739	62,502	32,666	62,493	13,469	66,033
Stormont	51,633	55,362	53,767	64,945	55,116	11,256	56,165
Glengarry	78,121	84,447	79,512	92,810	89,660	18,462	84,910
Prescott	56,412	69,173	54,863	58,719	52,450	12,354	58,324
Russell	47,002	44,335	42,091	52,424	33,796	9,324	43,929
Carleton	160,000	143,288	179,495	174,527	157,677	33,017	162,997
Renfrew	169,544	168,906	191,129	184,777	133,942	38,705	169,660
Lanark	169,275	188,319	190,580	196,318	143,644	37,492	177,628
Totals	1,186,682	1,224,766	1,273,086	1,364,563	1,136,889	259,114	1,237,197
Victoria	120,512	135,490	145,383	142,735	110,861	23,968	130,997
Peterborough	87,740	111,826	112,680	108,474	90,888	19,525	102,321
Haliburton	12,800	23,312	18,704	15,799	14,248	3,676	16,973
Hastings	135,431	147,986	146,873	154,242	133,094	29,788	143,525
Totals	356,483	418,614	423,640	421,250	349,091	76,957	393,816
Muskoka	33,094	37,179	35,747	31,206	18,354	5,830	31,117
Parry Sound	11,871	14,883	13,850	10,320	5,224	1,964	11,229
Algoma	21,004	19,190	15,494	14,725	6,239	2,644	15,330
Totals	65,969	71,252	65,091	56,251	29,817	10,438	57,676
The Province	5,547,867	6,086,866	6,511,918	6,608,418	5,746,185	1,129,157	6,100,251

FACTORY CHEESE.

TABLE No. X.—Showing by County Municipalities and groups of Counties the quantity and value of Cheese made at 626 factories in Ontario in 1886, the average dates of opening and closing, and the total number of factories reported in operation.

Counties.	Factories. No. in operation. 1885.	1886.	No. making Returns.	Quantity of— Milk used.	Cheese made.	Value of Cheese made.	Milk required to make 1 lb. of cheese.	Value of cheese per 100 lbs.	Average date of— Opening	Closing.
				lbs.	lbs.	$ c.	lbs.	$ c.		
Essex	1	1	1	377,167	37,903	3,957 65	9.95	10 44	May 19	Oct. 30
Kent	12	12	9	6,350,403	603,982	58,127 98	10.51	9 62	" 14	Nov. 5
Elgin	23	23	16	16,784,233	1,598,502	151,491 05	10.50	9 48	" 4	" 7
Norfolk	21	22	19	15,390,349	1,480,962	140,728 49	10.39	9 50	" 4	" 3
Haldimand	8	11	10	9,505,431	931,812	87,529 38	10.20	9 39	" 14	" 2
Welland	8	8	8	1,984,371	183,915	17,044 04	10.79	9 27	" 17	Oct. 12
Totals	73	77	63	50,391,954	4,837,076	458,878 59	10.42	9 49	May 9	Nov. 1
Lambton	21	20	18	12,874,048	1,214,786	116,827 26	10.60	9 62	May 17	Oct. 28
Huron	16	17	15	15,440,574	1,469,664	142,315 00	10.51	9 68	" 19	" 27
Bruce	19	17	17	14,917,214	1,438,032	140,596 22	10.37	9 78	" 18	" 29
Totals	56	54	50	43,231,836	4,122,482	399,738 48	10.49	9 70	May 18	Oct. 28
Grey	10	8	8	4,074,433	389,533	37,622 32	10.46	9 66	May 24	Oct. 25
Simcoe	6	5	4	1,004,088	95,150	9,260 94	10.55	9 73	" 24	" 6
Totals	16	13	12	5,078,521	484,683	46,883 26	10.48	9 67	May 24	Oct. 19
Middlesex	40	40	32	41,543,931	3,917,835	378,436 55	10.60	9 66	May 4	Nov. 10
Oxford	48	43	34	59,655,412	5,701,527	545,710 44	10.46	9 57	April 23	" 16
Brant	7	6	4	3,415,507	332,821	33,414 48	10.26	10 04	" 29	" 10
Perth	27	25	23	28,181,353	2,678,971	259,993 81	10.52	9 70	May 8	" 3
Wellington	12	11	11	13,016,165	1,245,005	119,683 69	10.45	9 61	" 17	Oct. 31
Waterloo	8	8	7	5,354,218	508,771	50,139 57	10.52	9 86	" 14	" 28
Dufferin	5	3	3	1,134,949	107,810	9,840 17	10.53	9 13	" 22	" 6
Totals	147	136	114	152,301,535	14,492,740	1,397,218 71	10.51	9 64	May 4	Nov. 8
Lincoln	4	5	5	3,278,589	314,594	28,915 35	10.42	9 19	May 9	Oct. 31
Wentworth	6	3	3	2,720,648	259,677	24,779 96	10.48	9 54	" 10	Nov. 8
Halton	2	1	.....	.....	.....	.....	.....	.....	.....	.....
Peel	4	1	1	654,476	61,671	5,800 00	10.61	9 40	May 15	Oct. 15
York	3	3	3	327,707	31,548	3,134 60	10.39	9 94	" 31	Sept. 29
Ontario	7	4	4	695,618	64,623	6,352 00	10.76	9 83	" 24	" 27
Durham	4	6	6	2,608,974	242,082	22,332 33	10.78	9 23	" 20	Oct. 17
Northumberland	32	39	30	19,800,940	1,940,825	167,495 14	10.20	8 63	" 2	" 27
Prince Edward	14	19	15	10,454,770	1,023,330	88,046 60	10.22	8 60	" 7	" 21
Totals	76	81	67	40,541,722	3,938,350	346,855 98	10.29	8 80	May 8	May 23
Lennox & Add	19	18	18	20,874,021	2,049,055	180,170 93	10.19	8 79	May 12	Oct. 27
Frontenac	33	37	30	15,022,947	1,461,820	129,165 69	10.28	8 84	" 8	" 18
Leeds & Gren	92	113	84	76,242,970	7,588,018	680,706 00	10.05	8 97	April 28	" 31
Dundas	21	*119	21	14,870,476	1,479,859	136,943 82	10.05	9 25	May 4	" 30
Stormont	25		22	14,284,892	1,396,773	127,450 07	10.27	9 16	" 8	" 26
Glengarry	47		28	12,888,086	1,273,529	118,603 05	10.12	9 31	" 10	" 21
Prescott	22		12	4,845,358	485,611	44,261 34	9.98	9 11	" 8	" 28
Russell	5	6	6	2,149,796	211,756	20,095 70	10.15	9 49	" 9	" 24
Carleton	11	10	8	4,540,706	448,204	41,864 38	10.13	9 34	" 12	" 22
Renfrew	4	3	3	928,915	92,447	8,942 60	10.05	9 67	" 31	" 5
Lanark	21	22	18	16,076,947	1,599,962	142,217 55	10.05	8 89	" 8	" 21
Totals	300	328	250	182,725,114	18,081,034	1,630,421 13	10 11	9 02	May 6	Oct. 26
Victoria	12	10	6	2,345,333	230,092	20,416 34	10.19	8 87	May 18	Oct. 27
Peterborough	20	20	17	9,336,889	901,366	80,264 83	10.36	8 90	" 9	" 28
Hastings	52	51	47	46,312,330	4,717,027	410,920 32	9.82	8 71	April 28	Nov. 2
Totals	84	81	70	57,994,552	5,848,485	511,601 49	9.91	8 75	May 2	Oct. 31
The Province 1886	.....	770	626	532,265,234	51,804,850	4,791,597 64	10.27	9 25	May 7	Oct. 29
The Province 1885	752	.....	536	522,769,107	50,755,871	4,120,834 46	10.30	8 12	" 4	" 29
The Province 1884	751	.....	567	517,899,803	50,538,932	5,284,124 48	10.25	10 46	" 3	" 30
The Province 1883	635	.....	440	373,962,719	37,079,896	3,872,927 52	10.09	10 44	" 3	" 30

* No location obtained of twenty factories of the Thistle Combination, reported to be situated in these counties.

FACTORY CHEESE.

TABLE No. XI.—Showing by County Municipalities and groups of Counties the average of days in operation, of number of patrons, of average number of cows, and of value of product per cow for 455 factories in Ontario making complete returns in 1886; also the totals for the Province returned for the four years 1883-6, and the yearly average for the four years.

Counties.	No. of factories returned.	Average No. of days worked.	Quantity of— Milk used.	Cheese made.	Value of cheese made.	No. of patrons.	Average No. of cows.	Value of product per Cow— Per season	Per day.
			lbs.	lbs.	$ c.			$ c.	cts.
Essex	1	140	377,167	37,903	3,957 65	45	160	24 74	17.7
Kent	5	147	4,345,830	408,686	39,726 29	392	1,654	24 02	16.4
Elgin	10	171	12,067,538	1,150,058	109,194 96	715	3,991	27 36	16.0
Norfolk	12	160	10,599,268	1,021,499	97,613 87	818	3,903	25 01	15.6
Haldimand	6	149	5,632,460	551,383	51,609 11	461	2,015	25 61	17.1
Welland	5	141	639,018	60,340	5,436 86	75	279	19 49	13.8
Totals	39	159	33,661,281	3,229,869	307,538 74	2,506	12,002	25 62	16.1
Lambton	12	150	10,193,741	958,819	92,713 68	829	3,718	24 94	16.6
Huron	10	140	11,087,129	1,052,164	103,036 82	913	4,119	25 02	17.9
Bruce	12	142	11,538,351	1,116,297	109,610 78	842	4,384	25 00	17.6
Totals	34	144	32,819,221	3,127,280	305,361 28	2,584	12,221	24 99	17.4
Grey	7	131	3,371,901	320,457	30,371 72	303	1,210	25 10	19.2
Simcoe	4	114	1,004,088	95,150	9,260 94	144	525	17 64	15.5
Totals	11	126	4,375,989	415,607	39,632 66	447	1,735	22 84	18.2
Middlesex	20	172	29,459,080	2,773,919	267,947 79	1,448	9,437	28 39	16.5
Oxford	28	179	49,184,268	4,720,715	450,357 64	1,864	15,743	28 61	15.9
Brant	3	168	2,413,507	232,821	23,914 48	142	829	28 85	17.2
Perth	15	155	20,891,844	1,989,347	195,179 69	1,128	7,265	26 87	17.3
Wellington	8	146	9,895,607	949,526	91,460 25	684	3,571	25 61	17.6
Waterloo	3	134	2,443,619	226,720	22,609 08	190	925	24 44	18.2
Dufferin	3	118	1,134,949	107,810	9,840 17	130	526	18 71	15.9
Totals	80	168	115,422,874	11,000,858	1,061,309 10	5,586	38,296	27 71	16.5
Lincoln	3	149	2,322,332	223,252	20,717 78	300	838	24 72	16.5
Wentworth	3	156	2,720,648	259,677	24,779 96	187	990	25 03	16.1
Peel	1	129	654,476	61,671	5,800 00	45	220	26 36	20.4
York	2	85	152,623	14,496	1,449 00	28	107	13 54	15.9
Ontario	4	110	695,618	64,623	6,352 00	102	310	20 49	18.6
Durham	4	131	1,861,343	169,199	15,662 88	253	732	21 40	16.4
Northumberland	19	156	13,524,493	1,330,572	115,188 95	841	4,573	25 19	16.1
Prince Edward	10	150	8,162,309	800,668	68,600 27	744	3,149	21 78	14.5
Totals	46	150	30,093,842	2,924,158	258,550 84	2,500	10,919	23 68	15.8
Lennox and Addington	11	149	14,820,447	1,458,476	128,694 36	1,103	5,596	23 00	15.4
Frontenac	15	144	7,227,451	688,960	61,639 06	376	2,951	20 89	14.5
Leeds and Grenville	65	159	59,042,424	5,867,552	526,464 29	2,438	21,055	25 00	15.7
Dundas	21	153	14,870,476	1,479,859	136,943 82	691	6,289	21 78	14.3
Stormont	14	148	10,403,107	1,022,918	93,211 73	552	4,238	21 99	14.8
Glengarry	27	143	12,637,606	1,247,528	116,236 89	795	5,640	20 61	14.4
Prescott	10	151	4,321,276	432,133	39,639 94	218	1,767	22 43	14.9
Russell	3	151	1,436,700	141,651	13,459 00	81	620	21 71	14.4
Carleton	7	145	4,193,077	414,461	38,766 70	227	1,836	21 11	14.6
Renfrew	3	110	928,915	92,447	8,942 60	74	455	19 65	17.9
Lanark	11	144	9,792,553	979,059	86,561 00	562	3,766	22 98	16.0
Totals	187	152	139,674,032	13,825,044	1,250,559 39	7,117	54,213	23 07	15.2
Victoria	5	139	1,756,765	171,528	15,174 95	154	749	20 26	14.6
Peterborough	14	148	7,593,635	729,453	65,842 61	499	2,805	23 47	15.8
Hastings	39	162	38,638,804	3,937,685	342,593 94	1,851	13,385	25 60	15.8
Totals	58	159	47,989,204	4,838,666	423,611 50	2,504	16,939	25 01	15.8
The Province: 1886	455	156	404,036,443	39,361,482	3,646,563 51	23,244	146,325	24 92	16.0
1885	433	157	436,335,359	42,479,047	3,446,515 45	26,300	154,824	22 26	14.2
1884	445	159	426,260,665	41,595,027	4,357,208 01	24,015	158,366	27 51	17.3
1883	385	156	327,353,679	32,495,811	3,396,882 21	19,797	117,577	28 89	18.5
1883-6	430	157	398,496,537	38,982,842	3,711,792 30	23,339	144,273	25 73	16.4

FACTORY CHEESE.

TABLE No. XII.—Showing by County Municipalities and groups of Counties the yearly average per factory of days in operation, of the quantity and value of Cheese made, of number of patrons, of average number of cows, and yield of milk and value of product per cow, computed from an aggregate of 1,718 factories making complete returns in the four years 1883-6.

COUNTIES.	No. of Days worked per season.	Quantity of—		Value of Cheese.	No. of patrons.	Average No. of cows.	Average per cow.				Milk required to make 1 lb. of Cheese.	Value of Cheese per 100 lbs.
		Milk used.	Cheese made.				Yield of milk—		Value of product—			
							Per season.	Per day.	Per season.	Per day.		
		lbs.	lbs.	$			lbs.	lbs.	$ c.	cts.	lbs.	$ c.
Essex	115	284,138	27,620	2,801	30	141	2,015	17.5	19 86	17.3	10.29	10 14
Kent	147	745,428	71,169	6,867	75	276	2,701	18.4	24 88	16.9	10.47	9 65
Elgin	165	1,028,783	98,370	9,639	69	347	2,965	18.0	27 78	16.8	10.46	9 80
Norfolk	163	986,704	95,486	9,042	74	346	2,852	17.5	26 13	16.0	10.33	9 47
Haldimand	153	865,730	84,495	7,820	69	322	2,689	17.6	24 29	15.9	10.25	9 25
Welland	132	218,562	20,841	1,928	25	107	2,043	15.5	18 02	13.7	10.49	9 25
Group	159	853,779	82,172	7,879	66	304	2,808	17.7	25 92	16.3	10.39	9 59
Lambton	148	845,253	80,269	7,800	68	315	2,683	18.1	24 76	16.7	10.53	9 72
Huron	143	1,242,313	119,003	11,835	100	451	2,755	19.3	26 24	18.3	10.44	9 95
Bruce	138	922,280	89,194	8,588	76	350	2,635	19.1	24 54	17.8	10.34	9 63
Group	143	987,803	94,627	9,250	80	367	2,692	18.8	25 20	17.6	10.44	9 78
Grey	134	579,069	56,874	5,318	54	222	2,608	19.5	23 95	17.9	10.18	9 35
Simcoe	130	399,728	39,135	3,910	44	182	2,196	16.9	21 48	16.5	10.21	9 99
Group	132	499,362	48,990	4,692	50	204	2,448	18.5	23 00	17.4	10.19	9 58
Middlesex	169	1,219,354	116,078	11,446	66	394	3,095	18.3	29 06	17.2	10.50	9 86
Oxford	178	1,718,935	165,209	16,456	69	550	3,125	17.6	29 92	16.8	10.40	9 96
Brant	166	975,667	95,747	9,500	66	354	2,756	16.6	26 84	16.2	10.19	9 92
Perth	155	1,204,764	115,103	11,422	70	418	2,882	18.6	27 33	17.6	10.47	9 93
Wellington	148	1,337,277	127,704	12,380	87	469	2,851	19.3	26 40	17.8	10.47	9 69
Waterloo	141	864,958	82,072	8,174	63	314	2,755	19.5	26 03	18.5	10.54	9 96
Dufferin	124	666,770	63,551	5,970	57	272	2,451	19.8	21 95	17.7	10.49	9 39
Group	166	1,335,827	127,928	12,663	69	444	3,009	18.1	28 52	17.2	10.44	9 90
Lincoln	152	658,184	63,048	5,680	65	226	2,912	19.2	25 13	16.5	10.44	9 01
Wentworth	160	1,122,721	108,598	10,521	79	412	2,725	17.0	25 54	16.0	10.34	9 69
Halton	123	102,686	9,868	912	8	45	2,282	18.6	20 27	16.5	10.41	9 24
Peel	125	721,377	67,778	6,864	52	275	2,623	21.0	23 14	18.5	10.64	9 39
York	102	216,582	20,475	2,036	23	108	2,005	19.7	18 85	18.5	10.58	9 94
Ontario	126	278,352	26,457	2,553	33	115	2,420	19.2	22 20	17.6	10.52	9 65
Durham	145	806,977	77,265	7,078	77	300	2,690	18.6	23 59	16.3	10.44	9 16
Northumberland	158	820,748	81,180	7,451	50	279	2,942	18.6	26 71	16.9	10.11	9 18
Prince Edward	152	863,094	85,961	7,696	73	322	2,680	17.6	23 90	15.7	10.04	8 98
Group	152	758,598	74,447	6,839	56	272	2,789	18.3	25 14	16.5	10.19	9 19
Lennox & Addington	152	1,261,988	124,897	11,422	94	490	2,575	16.9	23 31	15.3	10.10	9 14
Frontenac	148	570,058	56,137	5,609	31	219	2,603	17.6	25 61	17.3	10.15	9 99
Leeds & Grenville	163	979,942	98,146	9,130	40	351	2,792	17.1	26 01	16.0	9.98	9 30
Dundas	156	826,256	82,471	7,645	36	330	2,504	16.1	23 17	14.9	10.02	9 27
Stormont	151	812,370	80,619	7,175	42	329	2,469	16.4	21 81	14.4	10.08	8 90
Glengarry	156	599,782	58,626	5,989	35	260	2,307	14.8	23 03	14.8	10.23	10 22*
Prescott	146	503,051	50,662	4,591	29	232	2,168	14.8	19 79	13.6	9.93	9 06
Russell	140	416,482	41,750	3,990	27	192	2,169	15.5	20 78	14.8	9.98	9 56
Carleton	138	619,441	61,663	5,569	37	277	2,236	16.2	20 10	14.6	10.05	9 03
Renfrew	128	434,324	43,278	4,051	37	221	1,965	15.4	18 33	14.3	10.04	9 36
Lanark	147	905,559	90,610	8,220	51	359	2,522	17.2	22 90	15.6	9.99	9 07
Group	155	803,597	79,981	7,449	41	314	2,559	16.5	23 72	15.3	10.05	9 31
Victoria	141	483,203	47,988	4,452	39	192	2,517	17.9	23 38	16.6	10.07	9 28
Peterborough	148	627,823	61,019	5,616	40	233	2,695	18.2	24 10	16.3	10.29	9 20
Hastings	164	1,000,526	101,483	9,359	47	349	2,867	17.5	26 82	16.3	9.86	9 22
Group	160	870,473	87,598	8,078	45	309	2,817	17.6	26.14	16.3	9.94	9 22
The Province	157	927,815	99,763	8,642	54	336	2,762	17.6	25.73	16.4	10.22	9 52

* Only 2 factories in Glengarry made complete returns in 1885 out of a total of 104 for the four years.

CREAMERY BUTTER.

TABLE No. XIII.—Showing by County Municipalities the quantity and value of butter made at 29 creameries in Ontario in 1886, and the number of creameries reported in operation.

Counties.	Creameries.			No. of Patrons.	Butter.		Cheese.		Total value of produce.	Average price of butter per lb.
	No. reported in operation.	Returns made. Making butter	Returns made. Making butter and cheese.		Quantity made.	Value.	Quantity made.	Value.		
					lbs.	$ c.	lbs.	$ c.	$ c.	cts.
Essex	1									
Kent	1	1		48	7,425	1,633 50			1,633 50	22.00
Norfolk	1	1		22	2,768	457 55			457 55	16.53
Haldimand	1									
Lambton	2	2		126	57,519	10,738 17			10,738 17	18.67
Huron	4	1		148	50,290	10,007 00			10,007 00	19.90
Bruce	8	6		615	188,641	35,060 10			35,060 10	18.59
Grey	6	6		487	150,264	28,637 11			28,637 11	19.06
Simcoe	1	1		31	2,429	409 81			409 81	16.87
Middlesex	2									
Oxford	1									
Perth	3	1		140	49,228	9,023 69			9,023 69	18.33
Wellington	1	1		152	50,281	10,307 60			10,307 60	20.50
Waterloo	3	3	1	325	118,954	23,837 67	50,802	3,365 33	27,203 00	20.04
Wentworth	1									
Halton	2	1		50	12,234	2,344 60			2,344 60	19.16
Prince Edward	2	2	1	72	23,276	4,867 16	45,354	2,164 01	7,031 17	20.91
Leeds & Grenville	2	1		39	27,512	5,440 25			5,440 25	19.77
Dundas	2	1		66	55,701	12,181 00			12,181 00	21.87
Glengarry	1	1		47	27,331	5,852 57			5,852 57	21.41
Russell	2									
The Province. 1886	47	29	2	2,368	823,853	160,797 78	96,156	5,529 34	166,327 12	19.52
1885	27	13	2	912	353,347	69,583 40	126,591	7,784 69	77,368 09	19.69
1884	23	8	3	540	147,924	32,087 76	259,688	20,785 86	52,873 62	21.69
1883	27	12	3	639	243,902	51,816 99	134,446	11,218 28	63,035 27	21.33

PART III.

VALUES, RENTS AND WAGES.

VALUES OF FARM PROPERTY AND CROPS.

The returns of the value of farm property show a considerable increase in every part of the province over those of the preceding year. The following table gives the value by districts for each of the last two years, computed from the valuation given in the June schedule of farmers; also, a general average of values covering a period of five years, beginning with 1882, and the totals for the province for each year of the same period:

Districts.		Farm Land.	Buildings.	Impl'nts.	Live Stock.	Totals.
		$	$	$	$	$
Lake Erie	1886	89,070,639	24,248,743	6,521,784	13,424,970	133,266,136
	1885	87,223,494	24,395,411	6,484,440	12,560,647	130,663,992
	1882-6	88,973,551	22,518,812	5,986,384	12,161,896	129,640,643
Lake Huron	1886	76,295,546	18,071,900	5,169,464	12,467,529	112,004,439
	1885	73,348,633	18,062,529	4,979,041	11,855,995	108,246,198
	1882-6	76,459,901	16,403,791	4,754,151	11,494,762	109,112,605
Georgian Bay	1886	49,497,503	13,223,108	4,215,214	8,991,612	75,927,437
	1885	48,867,927	13,654,326	3,883,316	8,810,338	75,215,907
	1882-6	49,467,510	12,136,963	3,799,355	8,491,839	73,895,667
West Midland	1886	143,619,122	41,005,934	10,828,942	23,908,730	219,362,728
	1885	140,908,976	40,590,799	10,373,571	22,741,950	214,615,296
	1882-6	143,229,144	37,838,353	10,036,494	22,421,019	213,525,010
Lake Ontario	1886	140,745,006	43,094,768	10,774,325	22,218,138	216,832,237
	1885	137,146,878	43,323,229	10,655,442	20,564,889	211,690,438
	1882-6	137,858,110	39,603,616	9,871,862	19,990,677	207,324,265
St. Lawrence & Ottawa	1886	101,795,937	31,838,593	9,465,036	18,612,821	161,712,387
	1885	94,245,654	30,152,506	8,694,217	16,669,204	149,761,581
	1882-6	95,592,440	27,461,564	7,835,413	16,616,825	147,506,242
East Midland	1886	42,512,923	11,179,620	3,196,946	6,491,497	63,380,986
	1885	40,422,988	11,211,360	3,149,532	6,481,194	61,265,074
	1882-6	41,398,483	10,088,043	2,875,451	6,189,025	60,551,002
Northern Districts	1886	4,473,152	1,085,546	359,225	1,093,638	7,011,561
	1885	4,257,474	1,087,745	350,166	1,005,869	6,701,254
	1882-6	4,430,078	1,019,916	337,633	959,744	6,747,371
The Province	1886	648,009,828	183,748,212	50,530,936	107,208,935	989,497,911
	1885	626,422,024	182,477,905	48,569,725	100,690,086	958,159,740
	1884	625,478,706	173,386,925	47,830,710	103,106,829	949,803,170
	1883	654,793,025	163,030,675	43,522,530	100,082,365	961,428,595
	1882	632,342,500	132,711,575	37,029,815	80,540,720	882,624,610
	1882-6	637,409,217	167,071,058	45,496,743	98,325,787	948,302,805

The foregoing table shows an increase of $31,338,171, or 3¼ per cent., in the value of farm property of all kinds during the year. Each class of property has made an advance, but the increases under the heads of land, implements and live stock are particularly noticeable. The aggregate value of farm land alone has increased by $21,587,804—a rate of increase of nearly 3½ per cent.; but this is $6,783,000 less than in 1883, although the area of occupied land has increased in the interval by 300,000 acres and the area of improved land by 400,000 acres. The value of implements has increased by $1,961,211, or slightly over 4 per cent., and the value of the live stock of the province shows an increase of $6,518,849, a percentage of nearly 6½—the largest of any. In the figures for live stock, the West Midland, Lake Ontario and St. Lawrence and Ottawa groups together return an increase of $4,855,646, which is more than two-thirds of the total increase of the province under this head. Farm buildings show the smallest increase in value—$1,270,307—which is less than one per cent. In the previous year there was an advance of 5 per cent. in the value of buildings. There was an actual falling off, according to the returns, in the value of buildings in the Lake Erie, Georgian Bay, Lake Ontario, East Midland and Northern groups of counties, but there was a sufficiently preponderating advance in the remaining districts to give the small aggregate increase already indicated. There is a pretty uniform rate of increase in the value of implements all over the province, that for the St. Lawrence and Ottawa group being somewhat the greatest. The figures of the total value of property for the year show an increase of nearly 5 per cent. over the combined average for the five years past, which includes the figures for 1866 as well. Taken by groups, the St. Lawrence and Ottawa counties have made the greatest advance. The value of farm property in that district has increased by $11,950,806, or nearly 8 per cent. This exceptionally rapid rate of development is no doubt due to the fact that within the past year or two the northern and interior portions of the St. Lawrence group have been made available for settlement and improvement by the construction of the Canadian Pacific, the Kingston & Pembroke, and other lines of railway, now either partially or wholly built, which run through the district. The Lake Ontario group comes second in point of aggregate increase, and the West Midland group comes next; but the Lake Huron counties take precedence of both slightly in percentage of increase. The increase throughout the Lake Ontario group for the year was $5,141,799, or about 2½ per cent.; in the West Midland group it was $4,747,432, a little over 2 per cent.; but in the Lake Huron group, though there is an increase of only $3,758,241, yet owing to its lesser area the total value of property there is little more than half of that of either of the two groups first named, and the proportion of increase exceeds 3 per cent.

The following table gives the average value, for the two years past, of farm property per acre of occupied or assessed land. The figures are given for each district, and for each kind of property, and then the totals:

Districts.	Farm Land.		Buildings.		Implements.		Live Stock.		Totals.	
	1886	1885	1886	1885	1886	1885	1886	1885	1886	1885
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lake Erie	37 98	37 35	10 34	10 45	2 78	2 78	5 73	5 38	56 83	55 96
Lake Huron	33 53	32 09	7 94	7 90	2 27	2 18	5 48	5 19	49 22	47 36
Georgian Bay	24 57	24 00	6 56	6 70	2 09	1 91	4 56	4 32	37 68	36 93
West Midland	44 14	43 29	12 60	12 47	3 33	3 19	7 35	6 99	67 42	65 94
Lake Ontario	46 15	44 99	14 13	14 21	3 53	3 50	7 29	6 75	71 10	69 45
St. Lawrence & Ottawa	19 59	18 04	6 13	5 77	1 82	1 66	3 58	3 19	31 12	28 66
East Midland	16 37	15 80	4 31	4 38	1 23	1 23	2 50	2 54	24 41	23 95
Northern Districts	4 35	4 13	1 06	1 06	35	34	1 06	97	6 82	6 50
The Province	29 78	28 77	8 44	8 38	2 32	2 23	4 93	4 62	45 47	44 00

During the year there has been an increase in the value of all kinds of farm property from $44 in 1885 to $45.47 per acre, showing a gain for the year of $1.47 per acre. This is made up by, (1) increase in land values, $1.01; (2) in buildings, 6 cents; (3) in implements, 9 cents; and (4) in the value of live stock, 31 cents. The increase per acre was nearly six times as great as that for the preceding year. The groups which show the highest average come in practically the same order as in the preceding table of total values. The St. Lawrence and Ottawa counties lead off with an increase of $2.46; the Lake Huron group comes next with $1.86; then the Lake Ontario group with $1.65, and the West Midland group with an average of $1.48. Comparing these figures with the average for the period of five years past, which includes 1886, there is an average increase in the value of farm property all over the province equal to $1.49 per occupied acre in favor of the year.

The value of live stock per each 1,000 acres of cleared land in the province, for each of the two past years, with an average extending over the period of five years past, is shown in the following table by districts:

Districts.	1886.	1885.	1882-6.
	$	$	$
Lake Erie	10,351	9,771	9,694
Lake Huron	10,420	10,174	10,125
Georgian Bay	9,359	9,253	8,963
West Midland	10,913	10,454	10,493
Lake Ontario	9,914	9,212	9,059
St. Lawrence and Ottawa	8,605	7,753	7,914
East Midland	8,253	8,188	7,993
Northern Districts	10,615	9,691	10,233
The Province	9,801	9,275	9,233

As compared with the previous years the returns for 1886 in this table show a steady gain in values. The St. Lawrence and Ottawa group has made the greatest advance—slightly exceeding 10 per cent. during the year. The Northern districts come next, with a gain of nearly 10 per cent.; the Lake Ontario group shows a gain of 8 per cent., and the Lake Erie group of 6 per cent. The figures for the Georgian Bay and East Midland districts remain almost stationary, as compared with the previous year, but they show a considerable advance over the average value taken for the five years past.

FARM RENTS.—In the schedules sent to correspondents in 1886, information was asked for regarding the area of farm land held under lease, with the value and the rental paid. From these data table No. VI. has been prepared, giving the average under these different heads by counties and groups of counties, with the percentage of farm land that is leased and the average rent per acre. The following table presents this information by

county groups, with an average for the province, and, in addition, there is a column showing the per cent. ratio of the average rental to the average value of leased farms :

Districts.	Per cent. returned as leased.	Average area of leased farms.		Average value of leased farms.		Average yearly rental.	Per cent. ratio of rental to value of farm.	Rent per acre based on—	
		Acres occupied.	Acres cleared.	Land.	Buildings.			Acres occupied.	Acres cleared.
				$	$	$	c/°	$ c.	$ c.
Lake Erie	14.5	109.6	76.5	4,587	1,233	233	4.00	2 13	3 05
Lake Huron	13.6	118.6	84.0	4,646	1,192	240	4.11	2 03	2 86
Georgian Bay	13.8	122.4	82.0	3,449	969	181	4.10	1 48	2 21
West Midland	16.6	121.1	90.5	5,394	1,474	276	4.02	2 28	3 06
Lake Ontario	22.1	116.8	95.2	5,954	1,655	331	4.35	2 83	3 47
St. Law. & Ottawa	10.6	127.1	77.8	3,446	1,186	182	3.93	1 43	2 34
East Midland	15.7	138.0	82.4	3,955	1,063	219	4.33	1 59	2 66
Northern Districts	7.9	208.9	49.0	1,376	535	83	4.34	0 40	1 70
The Province	15.3	121.1	85.7	4,808	1,340	255	4.15	2 10	2 97

It will be seen from these figures that the percentage of leased lands is greatest in the oldest settled districts, the Lake Ontario group of counties leading off with more than one-fifth of the whole farm area under lease. In this group again the pioneer county of York heads the list with an area of over 30 per cent. returned as leased. The west Midland group comes next, with a percentage of 16.6, and the northern districts, where the farms are as yet largely operated by the owners, naturally show the smallest proportion. The percentage for the province is 15.3—nearly one-sixth. The columns showing the proportion which the rental bears to the value of the land will have an especial interest for owners, because in these the rate of interest received on the investment is shown. There is little variation in this respect in the different districts. In no case does the rate attain to 4½ per cent., while the average for the province is but slightly over 4 per cent. The highest rate of rent is in the Lake Ontario counties, where the average is $3.47, computed on the cleared land only, or $2.83 on the total occupied. The West Midland and Lake Erie counties stand next, with a difference of only one cent per acre in favor of the former, computed on the cleared land. For the province the average rent, computed on the cleared land, is $2.97 per acre, or $2.10 on the total occupied.

Market Prices.—The following table shows the average prices paid for agricultural produce in the principal markets of Ontario during the half year from July to December, 1886. The statement is made up from the market reports appearing in the newspapers published in the various towns and cities given in the table. To get the average prices of wheat, barley, oats, rye, pease, hay and wool, at the various points, an average is taken of the local market reports for the whole of the last six months of the year. To get the figures for corn, buckwheat, beans, potatoes, carrots and turnips, an average is taken only for the months of October, November and December—the period within which those products are harvested, and the bulk of them would naturally be marketed. The table also gives the average price paid for each kind of field grain for the last half of each of the past five years, with a general average covering the same

period, and the average price of corn, buckwheat, beans, hay, wool and roots in 1885 and 1886:

Markets.	Fall wheat, per bush.	Spring wheat, per bush.	Barley, per bush.	Oats, per bush.	Rye, per bush.	Pease, per bush.	Corn (in ear), per bush.	Buckwheat, per bush.	Beans, per bush.	Potatoes, per bush.	Carrots, per bush.	Turnips, per bush.	Hay, per ton.	Wool, per lb.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	$ c.	cts.
Belleville	72.5	72.5	58.1	36.3	49.3	55.1	35.0	37.5	75.0	36.7	....	....	8 11	19.2
Brantford	73.8	73.7	60.0	29.7	52.1	50.0	25.7	38.3	.....	48.5	....	....	10 02	20.6
Brockville	80.4	80.2	47.6	31.6	55.1	57.5	....	36.5	92.5	41.1	65.0	27.5	8 77	18.0
Chatham	71.7	71.7	47.0	25.6	....	50.4	20.4	....	76.7	47.1	....	....	9 50	20.0
Cobourg	74.9	74.9	50.1	32.9	45.0	51.1	....	...	.....	39.5	....	....	8 50	19.0
Guelph	74.6	73.4	55.1	32.4	52.1	50.5	....	....	.....	39.0	....	....	8 27	20.9
Kingston	71.9	72.3	48.6	27.4	45.6	52.3	27.1	34.1	112.5	44.0	52.0	50.0	8 23	18.6
Lindsay	71.5	73.3	45.5	30.3	50.0	50.1	....	....	.....	24.9	....	....	8 69	19.8
London	70.7	66.6	48.0	31.4	50.5	51.5	27.0	32.1	.....	45.3	20.0	23.1	8 75	19.0
Ottawa	75.3	78.3	51.2	31.3	52.5	54.1	37.0	37.6	93.5	49.9	25.1	21.7	11 58	18.2
St. Thomas	71.8	71.8	46.0	28.6	....	49.4	....	....	.....	45.5	32.5	....	7 64	19.1
Stratford	72.9	66.6	46.3	29.3	....	50.2	....	....	....	50.8	....	....	8 34	17.0
Toronto	76.9	77.0	53.7	35.1	58.5	54.7	....	....	.....	47.3	33.5	24.1	12 05	....
The Province—1886..	73.6	72.5	51.3	32.0	52.2	52.6	27.6	33.7	83.7	44.9	29.5	24.6	9 69	19.1
1885 .	81.5	80.6	55.2	31.5	55.2	58.0	27.9	39.2	80.0	41.1	32.5	23.6	9 85	17.4
1884..	80.5	81.4	53.6	33.1	59.7	64.4	....	....	.....	....	....	....	.....	....
1883..	105.0	107.0	57.0	38.0	62.0	71.0	....	....	.....	....	....	....	.....	....
1882..	101.0	106.0	65.0	43.0	64.0	74.0	....	....	.....	....	....	....	.....	....
1882-6	88.5	88.9	56.9	35.3	61.9	62.8	....	....	.....	...	....	....	.....	....

It will be seen that prices, in nearly every case, have made a steady decline since 1883—a condition of things which is not very encouraging, especially from the farmers' point of view. Comparing the figures of last year with those of 1883, there is a falling off in the price paid for fall wheat of a fraction short of 30 per cent.; in spring wheat of $32\frac{1}{4}$ per cent., and in barley of exactly 10 per cent. Compared with the prices of 1885, the figures of last year show a reduction of about 10 per cent. on wheat and barley, and a reduction of from 10 to 16 per cent. as compared with the average for five years. The highest prices, according to the reports, have been paid in the markets of Toronto, Ottawa and Guelph, while the figures for London and St. Thomas fall noticeably below the average. The reported price of wheat in the Brockville market appears exceptionally high, a circumstance of which no explanation has yet been received, and the same observation may be made of the barley quotation for Brantford. The prices given in the market reports for turnips are evidently those obtained by market gardeners, and should not be taken as indicating the value of turnips for ordinary feeding purposes. Wherever market quotations are given for corn in the local papers, they have been collated and placed in the table, and all reduced to the uniform standard of corn in the ear, on which all the relations of this cereal to the Bureau are based. Wool shows an increase, but the price is still nearly 10 cents per pound below the figures of eight or ten years ago.

VALUES OF CROPS.—Computing on the basis of the average market prices, as given in the foregoing table for the province, the total value of each kind of crop for the same years, with an average covering the entire period, is as follows :

Field crop.	1886.	1885.	1884.	1883.	1882.	Average 1882-6.
	$	$	$	$	$	$
Fall wheat	13,300,361	17,504,799	16,677,693	12,239,805	31,567,754	18,258,082
Spring wheat	6,900,961	7,358,684	11,892,264	10,406,887	10,245,959	9,360,949
Barley	10,009,799	9,126,540	10,247,806	10,496,172	15,784,865	11,133,036
Oats	18,772,995	17,397,369	19,097,476	20,737,971	21,715,731	19,544,308
Rye	577,573	701,871	984,010	2,018,201	2,223,231	1,300,977
Pease	8,439,004	8,123,591	8,817,395	7,578,343	8,144,525	8,220,572
Totals of six crops	58,000,683	60,212,854	67,716,644	63,477,379	89,682,065	67,817,924
						Average 1885-6.
Corn	2,982,265	2,996,848				2,989,557
Buckwheat	565,725	600,024				582,874
Beans	403,494	397,251				400,372
Hay and clover	29,016,182	32,033,727				30,524,955
Potatoes	7,189,548	8,668,460				7,929,004
Carrots	1,029,710	1,125,254				1,077,482
Turnips	11,577,019	9,708,505				10,642,762
Totals of seven crops	52,763,943	55,530,069				54,147,006
Totals of all field "	110,764,626	115,742,923				121,964,930

There is a decline in the values of the leading farm crops of 35 per cent. as compared with 1882. The values for 1882 were, however, exceptionally high, owing to the abundant crop of that year, as well as to the higher range of prices ; still a comparison with the average for the five years past shows that the crop of 1886 represented nearly $10,000,000 less than the average—a falling off of 14 per cent.

The same result is given in another form in the following table—crediting each district with its share of the total crop value, on the basis of the returns of yield :

Districts.	Total value of six crops. Wheat—Pease.			Total value of seven crops. Corn—Turnips.		
	1886.	1885.	Average. 1882-6.	1886.	1885.	Average, 1885-6.
	$	$	$	$	$	$
Lake Erie	6,839,736	7,655,291	7,457,447	6,645,294	7,340,268	6,992,781
Lake Huron	6,709,941	7,128,979	7,618,025	4,728,486	5,868,958	5,298,722
Georgian Bay	5,258,644	5,130,936	6,425,119	4,189,132	4,694,843	4,441,988
West Midland	12,421,430	13,124,309	14,655,798	11,270,253	11,560,674	11,415,463
Lake Ontario	13,478,877	14,275,411	16,201,411	11,145,065	11,169,081	11,157,073
St. Lawrence and Ottawa	8,370,475	8,629,446	9,923,698	10,676,345	10,925,058	10,800,702
East Midland	4,538,726	3,869,123	5,026,563	3,332,085	3,177,801	3,254,943
Northern Districts	382,854	399,359	509,863	777,283	793,386	785,334
The Province	58,000,683	60,212,854	67,817,924	52,763,943	55,530,069	54,147,006

To show the marketable value of each kind of crop per acre actually grown, the following tables have been prepared, giving the value for 1886 by districts, the provincial averages for each separate crop for the past two years, and the usual average for the longer period of five years:

Districts.	Fall wheat.	Spring wheat.	Barley.	Oats.	Rye.	Peas.	Average of the six crops.		
							1886.	1885.	1882-6
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lake Erie	14 70	10 55	12 96	12 54	8 08	11 65	13 28	15 36	15 08
Lake Huron	16 18	9 91	14 36	11 67	11 10	12 61	13 28	14 36	15 32
Georgian Bay	13 26	12 19	13 52	11.25	8 41	12 21	12 18	12 05	14 76
West Midland	15 55	10 35	14 51	12 27	10 38	12 96	13 36	13 97	15 73
Lake Ontario	13 61	12 91	13 62	11 81	7 57	11 99	12 66	13 54	15 12
St. Lawrence and Ottawa	14 81	12 70	12 89	10 79	9 58	10 44	11 33	11 80	13 33
East Midland	18 36	12 06	12 99	10 97	8 41	11 62	12 17	10 78	13 46
Northern Districts	11 77	11 39	11 84	10 28	9 98	10 72	10 72	11 06	14 05
The Province 1886.	15 00	11 95	13 66	11 57	8 52	11 99	12 63	....	.....
The Province 1885.	20 00	9 20	15 27	11 27	8 96	12 57	.....	13 26	....
The Province 1882-6	18 59	14 31	15 29	13 11	10 44	13 59	.....	.....	14 79

Districts.	Corn.	Buckwheat	Beans.	Hay and clover.	Potatoes.	Carrots.	Turnips.	Average of the seven crops.		Average of all the field crops.	
								1886.	1885.	1886.	1885.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lake Erie	20 44	7 01	18 72	13 05	46 52	100 58	102 88	16 43	17 48	14 67	16 33
Lake Huron	18 55	5 44	17 46	11 52	40 29	111 52	119 76	17 87	22 20	14 86	17 08
Georgian Bay	16 10	6 26	20 00	10 55	49 57	121 70	117 87	19 55	21 35	14 62	15 22
West Midland	18 75	7 22	17 72	13 06	48 67	123 76	128 31	22 97	22 99	16 68	17 11
Lake Ontario	16 26	7 51	19 33	13 33	49 27	112 60	111 66	21 10	21 54	15 46	16 18
St. Lawrence & Ott.	15 90	8 80	21 66	13 45	53 86	91 19	92 38	16 28	17 20	13 66	14 31
East Midland	14 96	8 48	20 94	11 19	65 52	110 22	109 39	15 68	17 13	14 02	12 94
Northern Districts.	11 34	9 99	24 63	8 86	83 48	79 14	83 87	17 02	16 90	14 26	14 36
The Province 1886.	19 06	7 99	19 15	12 64	51 30	111 12	117 02	18 90	.....	15 00	....
The Province 1885.	17 86	9 71	16 12	14 12	54 27	124 70	94 90	.....	19 88	.....	15 78

Corresponding to the general decline in total values of crops, the financial returns per acre show an appreciable falling off for the year. The general average of value per acre is reduced from $15.78 to $15.00—a depreciation of five per cent. in the money returns, or its equivalent, from all the field products of the farm. Fall wheat has dropped from $20 to $15 per acre—a decline of 25 per cent. On the other hand, spring wheat has advanced in a slightly greater ratio, but barley has made a decline of $1.67 per acre, or nearly 11 per cent. The West Midland counties show the highest record for all crops, the average there being $16.68, or $1.68 above the general provincial average. The Lake Ontario group comes next, with a combined average over all of $15.46. All the other groups fall more or less below the average for the province. The East Midland counties give the highest average for fall wheat, being $18.36 per acre, and the Lake Huron and

West Midland groups come next, in the order named. The figures for spring wheat show little variation in a number of districts. The Lake Ontario group leads slightly at $12.91 per acre, with the St. Lawrence and Ottawa group next at $12.70, and followed closely by the Georgian Bay and East Midland groups. The western peninsula naturally leads off in corn values, the Lake Erie group heading the list at $20.44 per acre. There is little variation in the value per acre of the hay crop in the different districts, with the exception of the Northern group, where the reported yield was lighter than the average.

The per cent. ratio which the average market value per acre of the produce of 1886 bears to the average value for the five years 1882-6 is shown in the following table by districts and for each variety of crop :

Field crops.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Law. & Ottawa.	East Midland.	Northern Districts.	The Province.
Fall Wheat	85	87	67	82	71	86	86	57	81
Spring Wheat	82	81	89	78	85	83	86	65	84
Barley	91	92	89	88	88	89	90	88	89
Oats	93	88	91	87	87	87	93	89	88
Rye	81	108	71	101	80	83	85	78	82
Pease	93	88	85	92	89	81	91	74	88
Average of six crops	88	87	83	85	84	85	90	76	85
Corn*	103	99	104	100	105	107	117	98	103
Buckwheat	89	82	91	94	90	92	97	112	91
Beans	111	100	120	109	105	102	123	105	109
Hay and Clover	91	89	97	91	95	99	97	86	94
Potatoes	113	74	77	104	105	93	107	116	97
Carrots	93	87	96	101	91	93	97	95	94
Turnips	104	105	105	119	106	104	120	113	111
Average of seven crops	97	89	96	100	99	97	90	100	97
Average of all field crops	92	88	88	91	90	92	95	91	91

It will be seen that, with regard to the six leading varieties of crops, the average values per acre for 1886 range from 11 to 19 per cent. below the average for the five years. For all crops the value of last year's product was 91 per cent. of the average annual value, the highest results having been obtained in the East Midland counties, and the lowest in the Lake Huron and Georgian Bay groups.

Exports of Animals and their Produce.—The export trade in live stock from Canada has not held its own in regard to aggregate numbers, as compared with the unusually active season of 1885. The falling off, however, occurs only in the exports of cattle, and it is greater in point of numbers of animals exported than in total values, from the fact that the average value per head has increased from $51.59 in 1885 to $63.40 in 1886, or 22 per cent.; yet it is only a recovery of the average of 1884. The proportion between the total value of the live stock export and the numbers is still further improved by the fact that the export in horses,—the most valuable class of farm

stock—has gone up from 11,978 in 1885 to 16,525 in 1886. The annexed table, compiled from the trade returns of the Dominion, contains a statement of the exports of horses, horned cattle, and sheep from Canada to all countries, for each of the fiscal years of the present decade. The numbers are given, with the aggregate value of each class of stock, and the average price per head :

Year.	Horses.			Horned Cattle.			Sheep.		
	No.	Value.	Average.	No.	Value.	Average.	No.	Value.	Average.
		$	$ c.		$	$ c.		$	$ c.
1881.....	21,993	2,094,037	95 21	62,277	3,464,871	55 64	354,155	1,372,127	3 87
1882.....	20,920	2,326,637	111 21	62,106	3,256,330	52 43	311,669	1,228,957	3 94
1883.....	13,019	1,633,291	125 45	66,396	3,898,028	58 70	308,474	1,388,056	4 50
1884.....	11,595	1,617,829	139 52	89,263	5,681,082	63 64	304,403	1,544,605	5 07
1885.....	11,978	1,554,629	129 79	143,003	7,377,777	51 59	335,043	1,261,071	3 76
1886.....	16,525	2,147,584	129 96	91,866	5,825,188	63 40	359,407	1,182,241	3 29

The increase in the export of horses by 4,547 head during the year is due almost entirely to an enlargement of this branch of trade with the United States, to which country we sent 4,432 more in 1886 than in the preceding year. There was also an increase of 109 in the number sent to Great Britain, the numbers being 12 and 121 for each year respectively. The reduction in the number of cattle, on the other hand, is largely due to the smaller trade with the United States, amounting to only 25,338 head as against 67,758 head in 1885. There were also 8,897 head less sent to Great Britain. The movement in sheep shows a falling off of 14,944 in the number sent to Great Britain, and an increase of 38,239 in the export to the United States, thus accounting practically for the total increase of 24,364 in the export of sheep to all countries for the year. Naturally, the great bulk of this trade is with Great Britain and the United States. The following is a statement showing the numbers of horses, cattle and sheep, exported from Canada to each of those countries in 1886, with the declared value, and the price per head :

Live Stock.	Great Britain.			United States.		
	Number.	Value.	Average per head.	Number.	Value.	Average per head.
		$	$ c.		$	$ c.
Horses.....	121	19,279	159 33	16,113	2,104,355	135 99
Cattle.....	60,549	4,998,327	82 55	25,338	633,094	24 98
Sheep.....	36,411	317,987	8 73	313,201	829,884	2 65

It will be noticed that the value per head of the stock sent to Great Britain is much greater than of that which goes to the United States. This difference is very marked in the comparative values of cattle and sheep, and it is owing, no doubt, to the fact that it costs as much to transport a poor animal across the ocean as it does a prime one, and that, irrespective altogether of the needs of the respective markets, Canadian shippers find it more profitable to send their heaviest or finished beeves and the most matured sheep to the old country, keeping mainly store animals and lambs for the trade across the line. A large proportion of the trade in sheep with the United States is made up of lambs for the city markets, and store cattle are bought in considerable numbers in Ontario for feeding establishments in the great centres of the Eastern States. This is, no doubt, the true explanation of the very low value per head of the export of cattle and sheep to the

United States. It is gratifying to find that our export trade in live stock with Great Britain still maintains the exceptionally favorable position which it has enjoyed for a number of years past, in that our cattle and sheep are not subject to slaughter at the port of landing, but may be transported alive to inland points. This exemption is due to the fact that Canada has been kept free from pleuro-pneumonia and those other contagious diseases from the ravages of which the herds and flocks of many countries have suffered so extensively. No country having a trade at all approaching to that of Canada enjoys a like privilege; indeed, Denmark and Sweden are the only countries of importance which are not now scheduled, while from Belgium, Germany and France the importation of cattle to Great Britain has been absolutely prohibited for years.

During the year there were exported from Canada to all countries 2,944 swine, valued at $7,558, of which number 2,695 went to the United States at a value of $6,401.

The importance of the egg industry entitles it to especial notice. Previous to January 1st, 1871, eggs imported into the United States were subject to a duty of 10 per cent., but with the changes in the tariff which took effect at that date eggs were placed on the free list. The influence of the change on the egg trade was at once apparent. In the United States customs returns for the fiscal year ending June 30th, 1871, for the last six months of which eggs were admitted free, the value of the eggs imported in the first half of the year, previous to the remission of the duty, was but $5,403, while for the latter half the value of the import went up to $290,820. The trade increased with astounding rapidity, the returns for the year ending June 30th, 1874, showing that the import from Canada for that year had reached 5,422,546 dozen, valued at $735,284. In the Canadian statement of the exports to that country there is an obvious shortage, owing to the failure to make entries at the customs; the United States figures of imports are larger for each successive year, as the following table for the present decade shows:

Year.	Total exports from Canada.		Imports from Canada into United States.		Total imports into United States.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Dozen.	$	Dozen.	$	Dozen.	$
1881	9,090,135	1,103,812	9,471,391	1,199,157	9,578,076	1,206,067
1882	10,499,082	1,643,709	11,728,518	1,793,167	11,929,355	1,808,585
1883	13,451,410	2,256,586	14,683,061	2,584,279	15,279,065	2,677,604
1884	11,490,855	1,960,197	14,688,338	2,356,313	16,487,204	2,677,360
1885	11,542,703	1,830,632	13,969,474	2,095,437	16,098,450	2,476,672
1886	12,758,532	1,728,082	14,465,764	1,896,672	16,092,583	2,173,454
Totals	68,832,717	10,523,018	79,006,546	11,925,025	85,464,733	13,019,742

This shows a difference in the aggregate for six years of over 10,000,000 dozen, the difference in value being $1,400,000; it also appears that Canada supplies nearly the whole of the imports of eggs, the average from all other countries being only 1,000,000 dozen a year. While, however, the volume of our export of eggs has increased in the past year, there has been a serious decline in the value, averaging more than two cents per dozen less than in the previous year.

As bearing on this subject of egg production, it may be stated that the United States census returns for 1880 place the total number of barnyard fowls at 102,272,135, and the yield of eggs at 456,910,916 dozen. The returns under this head from the various sections of the country show also that in localities near to good markets, where, in consequence, greater attention is paid to securing the largest returns, the yield of eggs per fowl is seven dozen per annum, while in the more remote sections an average of only three dozen is secured. The total value of the egg product in the United States for the year named is estimated at $55,000,000.

The following is a table showing the number and value of horned cattle and sheep imported into the United Kingdom from all sources for each of the calendar years 1881-5, inclusive:

Year.	Cattle.		Sheep.	
	Number.	Value.	Number.	Value.
		£		£
1881	319,374	6,251,577	935,144	2,191,762
1882	343,699	6,655,590	1,124,391	2,558,827
1883	474,750	9,332,242	1,116,115	2,518,382
1884	425,507	8,271,020	945,042	2,149,704
1885	373,078	7,046,477	750,866	1,625,029

Roughly speaking, about one-half of the number of cattle imported into the United Kingdom comes from the United States and Canada, and of this the proportion contributed by each country is about two to one in favor of the former. There has been a general decline in the imports of both cattle and sheep since 1883. The returns for the calendar year of 1886 are not yet to hand, but the Report of the Agricultural Department of Great Britain for the fiscal year ending June 30th, 1886, gives the following as the total imports of cattle, sheep and swine for that period into England, Wales and Scotland: Cattle, 319,538; sheep, 1,035,548, and swine, 21,394: a total of 1,376,480. Ireland is of course included in the table for the United Kingdom, but the imports of live stock into that country are insignificant when compared with those which go to the English and Scotch ports.

The magnitude of the trade in live stock from Ireland in the British markets is deserving of notice. The returns for 1886 show that during that year there were imported into England, Wales and Scotland, from Ireland, 717,389 cattle, 734,213 sheep, and 421,285 swine, making a total of 1,872,887. That a country of such limited area should be able to export annually such a large surplus of animals, after supplying the wants of a population exceeding in number that of the whole Dominion, shows what an important place the rearing of live stock occupies in the Irish agricultural economy.

Imports and Exports of Breadstuffs.—In the statistical tables given elsewhere there will be found a statement of the imports and exports of grain and breadstuffs into and from the Dominion for each of the past ten years. The figures are taken from the Dominion trade returns, and the same difficulty presents itself here that is met with in all statistics relating to Canadian imports and exports,—that it is impossible to extract from the total for the Dominion the portion that properly belongs to Ontario, owing to the circumstance that a large proportion of the Ontario trade, whether inward or outward, is entered at Montreal and Quebec, and is therefore credited to the province in which those ports are situated. The returns show a considerable movement in grain and its products between Canada and the United States and Great Britain. The bulk of our exports of wheat, oats, pease, flour and oatmeal goes to Great Britain, and that of rye and barley to the United States. From the United States we import large quantities of corn and wheat into Ontario; and of flour, cornmeal and oatmeal into the lower provinces, besides considerable quantities of the coarser grains. The returns of the imports and exports of wheat and flour for the ten years 1877-86 show that in every year save three the exports of both were largely in excess. In 1877 there was a deficit of 1,029,956 bushels of wheat, and the equivalent in flour of 1,304,317 bushels more, making in all for that year a shortage of 2,334,273 bushels. In 1884 the export of wheat was short of the import by 583,254 bushels, and of flour by the equivalent of 1,333,672 bushels, a total of 1,916,926 bushels. Again, in 1885 there was a deficit in the export of flour only, equal to 1,921,413 bushels of wheat, thus reducing the balance

in favor of Canada on wheat and flour together for that year to 374,249 bushels. The total shortage for the two years in which the imports in both wheat and flour exceed the exports amounts to 4,251,199 bushels. But the statistics for the other eight years present an aggregate surplus equal to 36,160,734 bushels, from which, if the two years' deficit be taken, there is a net surplus of exports of Canadian wheat and flour over imports for the ten years of 31,909,535 bushels. The largest export occurred in 1883, when, following the abundant harvest of the previous year, there was sent abroad 5,779,361 bushels of wheat in excess of the imports, and of flour the equivalent of 1,068,204 bushels more, making a total surplus for that year of 6,847,565 bushels. In 1886 the export of wheat and flour exceeded the import by 4,282,672 bushels. The total imports of wheat alone for the ten years were 46,845,687 bushels, and the exports were 74,415,600 bushels. In the returns for several years, wheat flour and rye flour are grouped together, but the proportion of the latter is hardly appreciable, and does not materially affect the result. The excess of total imports over exports of Indian corn during the same period amounts to 22,638,071 bushels, and the importation of corn for 1886 alone amounted to 4,528,878 bushels. The importance of the barley crop may be judged by the fact that during the past three years there have been exported to the United States, as shown by the American returns, an average of 9,590,926 bushels of barley per annum, valued at $6,538,730. Ontario alone has produced for the past five years 19,572,730 bushels per annum, an average of 27 bushels per acre. As showing, however, what can be attained by good cultivation, it is worthy of note that the average barley yield on Mr. Simpson Rennie's prize farm, in the county of York, for the same period, was 47 bushels per acre. Our principal market for pease and oats is on the other side of the Atlantic, and last year 2,598,544 bushels of pease and 3,280,787 bushels of oats were shipped to Great Britain.

An examination of the English agricultural tables gives an idea of the enormous development that has taken place within the past few years in the production of India wheat, and of the increasing extent to which, year by year, the British market is receiving its supplies from that source. During the five years 1876-80, the shipments of wheat from British India to the United Kingdom amounted in all to 28,614,429 bushels. In the succeeding five years, 1881-85, there were exported to the United Kingdom from the same source a total of 88,098,622 bushels, more than treble the quantity exported in the first period. In 1881—the first year of the latter period—the quantity exported was 13,709,950 bushels, and with the exception of 1884 the exportation has increased with each year till in 1885, the last year for which returns have been received, it amounted to 22,717,802 bushels. This great development is due to the influence of English capital and enterprise, which has of late years been especially directed in India to the opening up of the interior provinces, and to providing railway facilities for the transport of grain to the seaboard. The export from Australasia to Great Britain has also increased rapidly, reaching in 1885, in wheat and flour, 10,410,061 bushels. Russian exports show a considerable increase, the figures for 1885 being 22,581,694 bushels. The quantity of wheat and flour exported from the United States to Great Britain in 1885 was 76,482,853 bushels, and in 1886 it was 58,276,000 bushels. Since 1879 the Canadian export of wheat to Great Britain has steadily fallen from 8,925,908 bushels, the figures for that year according to the English returns, to 3,258,030 bushels, the amount of the export for 1885.

Cost of Producing Wheat.—With a view of presenting some data relative to the cost of wheat-growing in various sections of the wheat area of the continent, a table has been prepared from materials at hand, showing the cost per acre of producing and marketing wheat in Ontario, Michigan and Dakota. The figures for Ontario are furnished by a leading farmer of Wellington county, and are based upon an estimate of the cost of producing twenty acres; those for Michigan are calculated upon the basis of operating a single acre, and are taken from the official crop reports of the state; and the estimate for Dakota, on the basis of a hundred-acre operation, has been prepared by a farmer of

several years' actual experience in that territory. The following is the statement, giving cost of each operation, with rent of land or interest on the value, and an allowance for incidentals added :

Operations.	Ontario.	Michigan.	Dakota.
	$ c.	$ c.	$ c.
Ploughing and fitting	1 62½	2 86	1 25
Seed grain	1 35	1 34	90
Drilling, harrowing, etc	62½	36	65
Manuring	6 00	50	.....
Harvesting	1 00	2 12	1 05
Threshing	1 00	1 46	1 36
Marketing	62½	89	72
Rent of land	3 00	3 30	60
Insurance, taxes and repairs	1 25	1 37	1 03
Totals	16 47	14 20	7 56

The most expensive item in the Ontario calculation is the cost of producing and applying the manure, which is placed at $12 per acre. Half of this sum is charged to the wheat crop, and the remaining half is carried forward to the crop of the succeeding year. The charge of 50 cents per acre for manure in the Michigan estimate can hardly include the cost of applying it to the land, and would seem to be a very low estimate to place on the value alone of the manure or fertilizer required for an acre of wheat, not taking into account at all the tolerably costly operation of placing it on the land. In the Dakota estimate, the manure is left out of the account altogether, the object being to arrive at the cost of production on the western prairies as the work is now generally performed. Of course such a ruinous system of cropping cannot long continue without affecting the productive power of the land and decreasing the yield, but in the first years of prairie farming there is not the supply of live stock with which to make manure, and if there were the time and attention of the new settler are usually fully occupied with other duties which appear to him to be of more pressing importance. In the older prairie districts, both of Manitoba and the American west, the necessity of keeping up the fertility of the soil by the regular application of manure is recognized by all progressive farmers. The crop reports for 1886 place the average yield of wheat per acre for Ontario at 21 bushels, of Michigan at 16.4 bushels, and of Dakota at 14.1 bushels. Applying this average yield to the estimated cost of production, as given in the above table, it will be found that last year wheat cost in Ontario 78 cents per bushel to produce and place on the market, in Michigan 86 cents, and in Dakota 54 cents. In neither case is credit given for the value of the straw, which is probably worth $1.50 per acre in the rural districts for feeding purposes and for turning into manure. But even with this allowance made, it is obvious that wheat does not realise the cost of production at present prices.

Cost of Producing Beef.—The question of profitable meat production is so intimately connected with the question of successful agriculture, that it deserves a passing reference. Within recent years, owing to the decline in the yield and price of grain and the necessity of adopting a more diversified system of husbandry, greater attention has been paid to stock raising and feeding than formerly. With increased interest, there is a desire for improved methods and cheaper production. The importance of the practical commercial question, how to produce the largest quantity of marketable beef, mutton or pork at the lowest cost, is now recognized by intelligent agriculturists everywhere, and is not considered unworthy the attention even of eminent scientists. Chemical research

has been brought to bear upon the question of economy in feeding, by determining just what proportions of the various nutritive ingredients are consumed by animals in the different stages of their growth, and in the performance of the various functions of developing bone and muscle, producing flesh, or sustaining offspring; and in what proportions those ingredients are to be found in the grasses, grains and roots, which constitute the daily food of those animals. The intelligent breeder, through investigation and experiment, has brought his skill almost up to the perfection of an art. By close observation and a careful study of physiological laws and of the principles which govern reproduction, he has been enabled to develope and perpetuate the most desirable and profitable qualities in animals, such as early maturity, fruitfulness, aptitude to fatten, and that general conformation of frame which produces the least offal and the greatest proportion of the most valuable parts of the carcase. The subject is one of wide range, affording abundant opportunity for study and experiment, and should receive the earnest attention of every progressive farmer.

A careful account has been kept for many years by Mr. Simpson Rennie, of Scarborough, of the profit or loss in feeding cattle under his system. Mr. Rennie's practice is to buy store cattle in the fall, and fatten them during the winter on roots, hay, grain and oil cake. Every particle of feed is carefully weighed or measured, and charged against the transaction, on the basis of 10 cents per bushel for roots, $10 per ton for hay, $20 per ton for grain, and $30 per ton for oil cake. The following table gives a summary of the cost and net return from the operation for the past four years :

Year.	First cost of cattle.	Cost of food, etc.	Total cost.	Price realized.	Profit + or loss.-
	$	$	$	$	$
1883, 14 head	634	422	1,056	1,122	+66
1884, 15 head	653	359	1,012	1,060	+48
1885, 9 head	344	245	589	580	-9
1886, 22 head	720	535	1,255	1,250	-5

In regard to the apparent loss in the accounts for the past two years, Mr. Rennie writes : "Although the figures show a loss, I make a profit on the roots, hay, grain and oil cake, at the prices charged." There is also the great indirect advantage, which it would seem no computation in dollars and cents can quite accurately gauge, of having large quantities of excellent manure to apply to the land. It will be observed that the figures in the above table relate only to the operation of finishing off the already matured animal for the shambles, and that the question, not less important, of the cost of producing a steer up to that point, or say to three years old, has no place in the transaction. Some information under this head may be gathered from the experiments of Messrs. H. & J. Groff, of Elmira, Ont., who rank amongst the most intelligent and successful feeders of heavy steers in the Dominion. Messrs. Groff breed their own stock, and they keep an account of every item of cost from the day of birth. Two Shorthorn steers, bred by them and fed together, weighed at 12 months 1,000 lbs. each, and cost $34.67, or 3.47 cents per lb. During the second 12 months they made a gain of 600 lbs. each, at a cost of $52.13, or 8.68 cents per lb., making the whole cost of each at 24 months $86.80, or 5.42 cents per lb. In the third year they gained 650 lbs., at a cost of $81.50, or 12.54 cents per lb., making their total cost at three years $168.30 per head, or 7.48 cents cents per lb. Mr. Gillette, the foremost breeder and feeder of heavy cattle in the United States, produced a steer weighing at 24 months 2,250 lbs., at a cost of $102.72, or 4.56 cents per lb. At the end of the third year he weighed 2,450 lbs., and cost $186.36, or 7.60 cents per lb. It will be seen that at 6 cents per lb. live weight, each of these steers would have paid a profit at two years, but that at the end of the third year they showed a loss, proving that in these instances the limit of profitable production had been reached at the earlier age. There are many details which enter into and affect the question of profit or

loss which are not here given, but the figures are instructive as showing how moderate a margin of profit there is under even the best management, and how important it is that intelligence and business methods should be adopted in this as in every other operation on the farm.

THE SWEEPSTAKES FARM.—A short description of Mr. Simpson Rennie's farm, to which reference has occasionally been made in this report, will not be out of place. Kelvin Grove Farm is situated on the 5th concession of Scarborough, 3½ miles south of the village of Unionville, and 15 miles north of Toronto. It contains 102½ acres, 6 acres of which are woodland. The soil is a strong clay loam with a clay sub-soil, and before it came into Mr. Rennie's possession twenty-three years ago it was what would be called a wet farm. A system of drainage covering the entire farm was carefully mapped out and the work was begun, and now there are altogether some 3,200 rods of tile drains laid and 128 rods of open ditch. The size of tile used is five-inch for the mains, four-inch for sub-mains, and two-inch for laterals. The drains are three feet deep, though Mr. Rennie says that if he had the work to do again he would put them deeper. The rotation practised is pease on sod, followed by fall wheat or barley, then oats, then fallow or roots, succeeded by barley or spring wheat, seeded down to timothy and clover. Hay is cut for two years, and the grass is pastured one year, after which the land is broken up and sown again with pease. The manure is applied to the fallow or root land, and on stubble land ploughed under in the fall. The cultivation is most thorough; no weeds are permitted to come to perfection, or scarcely to appear at all; and there is absolutely no obstruction in the shape of stump or stone to be found anywhere on the farm. The fences are mainly of rails, laid straight between posts, which are set in the ground and kept together at the top with wire. The dwelling-house is of brick, and the barns and out-buildings of frame—substantial, commodious, and arranged with a view to comfort and convenience. The orchard, situated near the buildings, is surrounded by a belt of Norway spruce, which in a few years has attained a height of twelve feet. The utmost order and neatness prevails everywhere on the farm, and every operation is conducted in an intelligent and methodical manner.

As is elsewhere stated, Mr. Rennie's plan is to grow a considerable quantity of cereals, roots and hay, and buy store cattle in the fall for winter feeding. Owing to his superior methods of cultivation, and to the care exercised in the selection of seed, Mr. Rennie finds that he can sell all his grain for seed at a price so much higher than the market that it generally pays him to sell the whole, and buy other grain for feeding purposes. On this account, therefore, the prices which he receives are somewhat higher than the average. The following table shows what the average yield has been per acre for each kind of crop grown on this farm for the period of the last five years, with the average value per acre, and the average price received in each of the five years:

Kind of Crop.	Average bushels per acre.	Average value per acre.	Yearly market price per bushel.				
			1882.	1883.	1884.	1885.	1886.
		$	$	$	$	$	$
Wheat	25	27 14	1 10	1 08	0 80	0 84	0 85
Barley	47	34 17	0 75	0 72	0 75	0 80	0 58
Oats	66	28 53	0 50	0 43	0 42	0 42	0 40
Pease	32	18 21	0 72	.....	0 56	0 58	0 52
Corn	129	58 63	0 35	.....	1 00	0 50	0 10
Mangels	641	64 10	0 10	0 10	0 10	0 10	0 10
Carrots	956	95 60	0 10	0 10	0 10	0 10	0 10
Potatoes	110	51 55	0 50	0 55	0 30	0 45	0 50
Hay (tons)	1	21 48	14 00	12 00	12 00	12 00	10 00

The merits of Kelvin Grove as a model farm have not escaped public recognition. In 1883 the county of York formed one of the group of counties which competed in that year for the prizes given annually by the Agriculture and Arts Association of Ontario for the best managed farms. Mr. Rennie entered for competition and easily took the gold medal for the year, the judges in their report stating that they considered his management "almost faultless." In 1885 the prize farm competition took place in the only group of counties in the province remaining to have an opportunity of contesting, and in 1886 a general sweepstakes competition for the whole province was instituted. The contest for this prize was unusually keen, the entries including all the gold medal farms of previous years, nearly all the silver medalists, and a number of the bronze medalists. Again the highest honors fell to Mr. Rennie, who secured the sweepstakes prize for the best managed farm in the province. The judges in their report referring to this farm say:

"Kelvin Grove has not attained its present proud distinction by accident or as the result of a happy combination of circumstances. In several respects others of the competing farms had by nature a most decided advantage, as in natural beauty, water supply, and in other ways. It has been made what it is by the unflinching determination of its owner. * * * * It has apparently been his aim to seek pre-eminence in whatever he has undertaken, and he has sought it with a determination that would brook no denial."

Lest it should be imagined that Mr. Rennie has achieved his success by the use of outside capital expended on his farm, it may be well to state that Kelvin Grove has been brought up to its present state of perfection without the aid of a single dollar that has not come directly as the produce of the farm; and not only that, but Mr. Rennie states that his income from other investments which he has been able to make from time to time out of the surplus revenues from the farm now exceed his annual income from the farm itself.

FARM LABOR AND WAGES.

The remarks made in former reports of the Bureau regarding the supply of farm labor would apply almost without change to the season of 1886. The steady downward tendency of the rate of farm laborers' wages was then commented on, and the continuance of that tendency is shown by the following table*:

Districts.	Farm Hands.								Domestics.	
	Per year.				Per month.				Per week.	
	With board.		Without board.		With board.		Without board.			
	1886.	1885.	1886.	1885.	1886.	1885.	1886.	1885.	1886.	1885.
	$	$	$	$	$	$	$	$	$	$
Lake Erie	154	157	248	246	16.84	16.96	26.10	26.07	1.46	1.44
Lake Huron	157	163	250	263	17.13	17.68	26.59	27.95	1.49	1.46
Georgian Bay	155	159	257	257	16.91	17.52	26.80	27.82	1.44	1.48
West Midland	158	159	254	254	17.07	17.31	26.76	27.71	1.54	1.52
Lake Ontario	163	162	248	255	17.12	17.38	26.65	27.19	1.59	1.57
St. Lawrence and Ottawa	159	158	252	248	17.33	17.16	26.99	26.67	1.54	1.52
East Midland	165	160	252	246	16.56	16.93	26.28	26.39	1.50	1.50
Northern Districts	151	161	254	267	17.48	18.55	27.43	28.65	1.51	1.49
The Province	158	160	251	253	17.06	17.32	26.64	27.18	1.52	1.51

* The wages of farm hands with board per year in 1886 are computed from 3,779 returns, and without board from 1,851; the wages per month with board are computed from 5,596 returns, and without board from 2,245; the wages of domestic servants are computed from 4,896 returns—the June schedule filled up by farmers.

The replies of correspondents to the questions asked under the head of labor and wages showed clearly that during last season the tendency already noted was rather increasing than diminishing, though some modification in the assigned causes was noticeable. To the first question, Was the supply of farm laborers equal to the demand this year? the replies were almost unvaryingly in the affirmative. The exceptions were few and far between, and were generally attributed to local or incidental causes. Occasionally the remark was made that though ordinary laborers were abundant, the more or less skilled labor required for special branches of farm work, such, for instance, as draining, fencing, etc., was scarce. To the second question, Is the rate of wages likely to rise or fall, and why? the replies were not quite so uniform. The large majority of correspondents predicted very positively a decline in wages, basing their opinion on the low price of nearly all kinds of agricultural produce, and the still increasing application of labor-saving machinery to the operations of the farm. A comparatively small number stated that wages were likely to remain stationary, while a few correspondents in particular localities predicted a rise, as the result usually of their peculiar position or circumstances, such as proximity to lumber woods, factory towns, public works in contemplation or under construction, etc. It is proper to say, however, that with regard to one of these competitors for labor—the lumber industry—correspondents in some localities which had hitherto felt its influence on the labor market declared that it was felt less than formerly, owing to the exhaustion of the timber supply or the dulness of trade. Unless, therefore, a general rise in the price of agricultural produce should supervene, there appears to be little likelihood that the rate of wages will rise, to say the least.

The steady increase in the employment of machinery on the farm is no doubt the most important factor in decreasing the number of laborers required, and consequently lowering the rate of wages. The ordinary kinds of machinery, such as mowers, reapers, horse-rakes, etc., are almost universally employed where the land is not too rough for their use. A considerable increase in the number of self-binders was also reported, and it would have been much greater but for the high prices. A great many farmers will invest in self-binders when their present reapers become useless, but they do not care to throw these away while they can be used. In the east, where wheat is less grown, the self-binders are not so much in favor as in the west, where every farmer who can afford it will soon possess one.

With regard to domestic labor on farms the situation is entirely different. Female help is growing scarcer, and correspondents last year were almost unanimous in reporting great difficulty in securing any. The superior attractions offered domestic help in cities and towns is the chief cause of this, and no one seems able to suggest an efficacious remedy.

FROM THE MAY REPORT.

A. M. Wigle, Gosfield, Essex: Supply of farm laborers sufficient at from $12 to $15 per month with board: without board, $22.

Henry Morand, Sandwich East, Essex: There is a sufficient supply of farm laborers, but those of first class are scarce. Good hands receive from $15 to $20 a month with board.

Robert Cummings, Harwich, Kent: There appears to be a sufficiency of male help, but domestic servants still remain scarce. The wages of men range from $17 per month with board, to $25 without board.

Thomas Seane, Howard, Kent: There is a sufficient supply of farm laborers; wages $13 to $15 with board; without board $18 to $20.

J. W. Howey, Bayham, Elgin: Plenty of farm laborers; average wages, $15 per month with board, and about $20 to $24 per month without board.

Jabel Robinson, Southwold, Elgin: Laborers are plenty this season; wages, per month—by the year—about $14 with board. Farmers cannot afford to pay high wages at the present prices of produce.

A. N. Simmons, Middleton, Norfolk: Little demand for laborers; the low-down binder at the low price of $150, bids fair to lessen the demand even more.

Herbert Kitchen, Townsend, Norfolk: Numbers of farm laborers are willing to work by the month, for the season, but few are willing to depend on working by the day; wages $14 to $18 per month, with board; without board, $15 to $25 per month.

John H. Houser, Canborough, Haldimand: There is a sufficient supply of farm laborers, but they ask such enormous wages that farmers are doing without them.

E. A. Dickout, Bertie, Welland: There is a scarcity of really good, efficient help; wages from $15 to $20 per month, with board; $20 to $25 without board.

John Holcomb, Thorold, Welland: There is a sufficient supply of farm laborers, such as they are; the average rate of wages, by the year, is about $12.50 per month, with board; without board, about $19 per month for a like period.

Jas. H. Patterson, Dawn, Lambton: There are enough of farm laborers at from $13 to $15, with board; times are dull on the farm.

J. B. Hobbs, Warwick, Lambton; The farm laborer market is abundantly supplied, and is likely to be overstocked with a class the least useful—I mean poor immigrants that have to learn after they arrive. Such immigrants as have enough of money to rent a farm and stock it are the only ones likely to succeed here, as we rarely hire men in the winter.

G. Edwin Cresswell, Tuckersmith, Huron: There is a good supply of farm laborers; wages about $18 per month for the summer season. In view of the general low figures for farm produce, farmers seem disinclined to give as high wages as in previous years.

Alfred Carr, Wawanosh E., Huron: Plenty of help, as many farmers are getting in machinery, and as a consequence they do not require much hired help; wages, for the summer, say $16 to $18 per month, and board; girls from $5 to $6 per month.

James Grant, Kinloss, Bruce: Yes, there is a sufficient supply of farm laborers; wages range from $16 to $19 per month, with board.

Malcolm Cameron, Bentinck, Grey: No demand for farm laborers; farmers are doing their own work; wages from $13 to $15 per month and board.

Robt. Dunlop, St. Vincent, Grey: Farm laborers rather scarce; wages about $18 per month with board; without board, $26.

Jas. Robertson, Flos, Simcoe: Farm laborers rather scarce at $16 per month and board; without board, $24.

John Lennox, Innisfil, Simcoe: Big supply of farm laborers. Good men get about $18 per month: in former years this same class of men received $20 per month.

R. C. Hipwell, Medonte, Simcoe: There appears to be a surplus of farm laborers; wages range from $12 to $16 with board; without board, $20 to $24.

Peter Stewart, Williams W., Middlesex: The supply of farm laborers is sufficient, such as they are; it is hard to get a good ploughman.

M. & W. Schell, East Oxford, Oxford: A scarcity of competent, active and reliable young men; married men not so much wanted; wages $15 to $16 per month with board; without board, $20 to $22 per month for the year.

Thomas Lunn, Oakland, Brant: There is a full supply of farm laborers. The six months' system is the custom here; wages about $18 per month and board; without board, $28.

Robert Beatty, Blanshard, Perth: There is a sufficient supply of men, but women servants are very scarce; wages for men $17 to $18 per month and board; for women, $6 to $8 per month.

R. Ballantyne, Downie, Perth: Farm laborers are scarce; wages $15 to $18 per month and board for the year; for the summer six months about $18 per month with board; without board $25.

Alex. McLaren, Hibbert, Perth: Farm laborers are very scarce owing to the number going to Dakota and the west; average wages per month with board $17 to $18.

W. C. Smith, Wilmot, Waterloo: Good men are getting $20 per month and board. A large number of English lads have come into this section, and they are taking the place of experienced hands. Some of them work for their board, and others for $5 and $6 per month.

Colin Cameron, Nassagaweya, Halton: There is quite a supply of farm laborers—more than there has been here for many years: wages about $18 per month and board for eight months.

Jas. H. Newlove, Albion, Peel: Supply not equal to the demand; wages $18 to $22 per month with board.

John Campbell, Chinguacousy, Peel: Plenty of men to be had; wages about $18 per month with board.

J. D. Evans, Etobicoke, York: Farm labor is scarcer than for seven years past: good hands are getting $200 per year and board.

F. C. Sibbald, M.D., Gwillimbury N., York: Farm laborers too numerous; wages $15 per month with board.

N. A. Malloy, Vaughan, York: A scarcity, at $17 to $20 per month with board; without board $25 to $30.

Joseph McGrath, Mara, Ontario: There is rather a scarcity of farm laborers, at from $16 to $17 per month and board.

Benjamin F. Brown, Thorah, Ontario: Laborers are plentiful, at $17 per month and board: without board, $21.

Wm. Lucas, Cartwright, Durham: Abundance of farm laborers: wages from $15 to $18 per month and board, for seven or eight months of spring, summer and early fall.

George Sanderson, Cramahe, Northumberland: Plenty of men at $14 per month; but domestic servants are scarce.

J. C. Conger, Halloweil, Prince Edward: Farm laborers are plentiful at from $15 to $18 per month with board, and $24 to $26 per month without board.

Jas. Cooper, Marysburg South, Prince Edward: A scarcity of farm laborers at about $15 per month and board.

W. N. Mallory, Adolphustown, Lennox and Addington: A scarcity of farm hands at $19 per month with board.

Leonard Wager, Shetfield, Lennox and Addington: Plenty of farm laborers; wages generally about $15 per month with board.

Wm. Hamilton, Hinchinbrook, Frontenac: There is no demand for farm laborers; wages, $10 per month with board; without board about $15.

M. Spoor, Wolfe Island, Frontenac: Farm laborers are very scarce here; they demand more wages than they can earn, say from $15 to $18 per month with board; and $25 without board.

Gideon Fairbank, Edwardsburg, Leeds and Grenville: There appears to be a fair supply of farm laborers; wages about $16 per month with board.

Geo. C. Tracy, Williamsburg, Dundas: Supply about sufficient; wages about $15 with board for five months ending September 30th.

F. Kosmark, Admaston, Renfrew: The supply of farm laborers is amply sufficient: servant girls are not so scarce as formerly, either; wages, as a consequence, are lower than before

Peter Guthrie, Darling, Lanark: There is a sufficient supply of men, but female help is scarce; wages of men, $16 to $18 per month with board.

Peter D. Campbell, Drummond, Lanark: Men are scarce; wages rate from $15 to $20 per month with board.

Robert Lawson, jr., Lanark, Lanark: There is a sufficient supply of farm laborers at about $16 per month and board.

N. Heaslip, Bexley, Victoria: Abundance of laborers; wages range from $14 to $16 per month with board, for a term of six months.

Porter Preston, Belmont, Peterborough: Abundance of farm laborers; wages from $12 to $15 per month with board.

John Wilson, Dungannon, Hastings: No complaints as to the supply of farm laborers; wages about $16 per month with board.

Wm. Chapman, Huntingdon, Hastings: There is a scarcity of good farm laborers; wages, $14 per month with board; without board, $20.

Moses Davis, Morrison, Muskoka: The supply is sufficient at about $16 per month with board; all farm hands board with their employers.

Donald Gordon, Chapman, Parry Sound: Farm laborer supply sufficient; wages, $18 per month with board.

A. McNabb, Thessalon, Algoma; There is a sufficient supply of farm laborers; the average rate of wages is $16 per month with board.

FROM THE AUGUST REPORT.

John Hooker, Mersea, Essex: There was a good supply of labor in haying and harvest; wages $1.50 per day. There are a great number of single reapers and quite a number of self-binders in use, but no new self-binders this year on account of the high prices charged by the ring formed by the manufacturers.

John Wright, Dover, Kent: Labor is plentiful, but, owing to binders and other machinery being used very few hands, other than the regular summer supply, are needed; wages are from $1.00 to $1.25 per day for harvesting, and from $15 to $18 per month for the summer.

Lewis Simpson, S. Dorchester, Elgin: I have no recollection as to when labor was so easily obtained in haying and harvesting as it has been the present year. The machinery for harvesting has placed the farmer in a more independent position. With a self-binder, he and a man or two can take off a large harvest which formerly it took seven or eight men to do. Wages from $1.00 to $1.50.

W. Gowling, North Cayuga, Haldimand: Quite a number of binders at work, also hay-forks and other implements; wages by month, for six months, about $18; for haying and harvest $20 to $30, according to ability. Girls are hard to get for house work.

L. Buckton, Crowland, Welland: Labor supply in general is sufficient. Some farmers who only hire for a month or two found a difficulty in getting men. Self-binders are used to a great extent, and I think, as soon as the reapers get worn out there will be no more used. Wages $1.00 per day with board.

A. A. Meyers, Sombra, Lambton: The labor supply was more than equal to the demand: farmers are all well supplied with machinery. Self-binders are doing the work extra well, many farmers going from one farm to another and cutting large areas of land by the acre, which makes it very convenient. Wages were $1.00 per day in wheat-binding and heavy work.

Hugh McPhee, Ashfield, Huron: Labor supply sufficient. Binders are fast coming into use. Those who are provided with reapers still retain them, but almost all who buy invest in a binder. Wages per day, with board in harvest, $1.25. For July and August, with board, about $25 per month. Girls, per month, from $6 to $8, and scarce at that

D. McNaughton, Bruce, Bruce: The labor supply appears to be equal to the demand this season, the reason, I believe, being that fewer hands are employed on account of so many self-binders and other labor-saving machines being in use. A boy now-a-days can do the work that it took an able-bodied man to do a very few years ago; another reason is that farmers find it to their advantage to grow less grain and more live stock. Wages have fallen since last harvest, but are not yet on a level with the price of farmer's produce.

W. Totten, Keppel, Grey: Farmers are using more machinery every year, which lessens the demand for hired help. Self-binders are being introduced slowly, but steadily, this being a new township. Sufficient help can be procured at $1 per day in haying and $1.25 for harvesting, with board.

George McLean, Oro, Simcoe: Plenty of help in haying and fall wheat harvesting. No self-binders used in this vicinity. Nearly every farmer has a reaper, mower and sulky-rake. Wages about $1 per day and board.

James Alexander, Ekfrid, Middlesex: Labor supply plenty: wages from $1 to $1.25, with board. Nearly all the grain has been cut with self-binders, which would soon come into general use were the price a little more reasonable, say about $150.

J. M. Kaiser, Delaware, Middlesex: The labor supply has been sufficient, but first-class men are scarce. Self-binders are coming more into use every year; so are seeders; also hay forks and other elevators. Very few men are engaged by the day; by the month, with board, from $12 to $18 is paid.

F. Malcolm, Blandford, Oxford: With the improved machinery of to-day, the demand for extra help in harvest has greatly fallen off. Self-binders have been a great boon to farmers. There is quite a sufficiency of farm help; wages, $18 per month, for seven or eight months; $175 per year.

Duncan McLaren, Hibbert, Perth: Labor supply plentiful and rate of wages about $30 per month with board. The season has been characterized by the introduction of an unusually large number of self-binders, which appear to give general satisfaction.

Wm. Douglas, Onondaga, Brant: We are getting more binders every year; there would be more purchased only the manufacturers have combined to keep up the price. The rate of wages about the same as last year, $1.25 per day and board.

W. D. Wood, Eramosa, Wellington: Labor supply quite sufficient to meet demand, with wages lower than two or three years ago; about $45 for two months in haying and harvest, or $1 to $1.25 per day, being the rate. The binder is causing much grumbling amongst day laborers, as it makes the farmer almost independent of their services.

Thomas Mitchell, North Dumfries, Waterloo: Labor supply abundant; self-binders the rule all round, and with hay tedders and loaders the farmers are doing the most of their own work, with much less hired help than formerly. Servant girls are the great want at any wage.

Adam Spears, Caistor, Lincoln: Laborers have been hired for the hay and harvest for $16 to $20 a month, or $1.00 to $1.50 per day, with no lack of hands. Self-binders are doing a good share of the harvesting, making the demand less for labor.

Robt. Inksetter, Beverley, Wentworth: The supply of labor has been more than is needed on account of the lightness of the crops; self-binders are coming into general use. Horse-power hay forks are also a great saving of labor. Wages $1.00 in haying and $1.25 in harvesting.

Wm. McDonald, Esquesing, Halton: Haying and harvesting are getting to be easy work now; with rack-lifters, hay-forks, and self-binders, two men can do now what a few years ago would take four or five to do; the greatest objection to self-binders is the monopoly on the twine, as it costs 12 cents per pound, when a better quallity of manilla made into rope can be bought for 9 cents per pound; since harvesting began men are asking $1.25 per day.

Wm. Kersey, Toronto Gore, Peel: There has been a plentiful supply of harvest hands, and wages lower than for a number of years, rating about $30 for one month, $55 for two months, $1.25 per day. Self-binders are coming more into general use; about one-half or more of the farmers have got one. They not only save a great deal of hard work, but leave a part of the hands, that were formerly all employed in the harvest-field, to work on the fallows and root crops and other work that was partly neglected about this time of year.

George Evans, jr., Georgina, York: The labor supply for haying and fall wheat harvest was sufficient, and is likely to be the remainder of harvest, almost every farmer uses self-binders, mowers, sulkey-rakes, etc., which causes little demand for harvest hands. The rate of wages by the day is $1.00, by the month for haying and harvesting about $25, and for the summer months $14 to $16 per month.

E. Hodges, West Whitby, Ontario: We had a plentiful supply of labor in haying and still a few men out of employ. Self-binders are being used; one-half of the farmers have them in this locality. In haying, wages $1.00 per day with board.

R. Windatt, Darlington, Durham: Self-binders and other labor-saving implements are largely used; 75 per cent. of the grain will probably be cut by self-binders; other implements in proportion. Sufficient supply of labor: wages $1.00 per day, $16 per month.

John Riddell, South Monaghan, Northumberland: The labor supply in hay and harvest appears equal to the demand. Self-binders and other labor-saving implements are more numerous than ever before. Rate of wages, for good men during hay and harvest, is $25 to $30 and board per month.

Saml. N. Smith, Sophiasburg, Prince Edward: Labor supply was plentiful in haying, and seems so for harvesting other crops. There are a few using self-binders and they give the best of satisfaction. A reaper will be only a thing to look at if the self-binders get into general use and have some slight improvements in them. Wages are about $16 per month for the best with board, and about $22 without board.

Nelson Rose, North Marysburgh, Prince Edward: Labor supply hardly up to the demand. We have plenty of mowers and reapers, but only two binders to my knowledge in the township. Wages—$1.00 in haying, and $1.25 in harvest per day with board.

David James Walker, Storrington, Frontenac: No scarcity of men in haying and harvest. Only a few self-binders in the township, but give good satisfaction where used. Every farmer has a reaper and mower, horse rake, etc., etc. The weather has been very favorable, and hands are not in much demand. Wages, $1.00 per day and board in harvest, and from $13 to $18 per month and board.

Albert Abbott, Elizabethtown, Leeds: Labor supply has been plentiful. A good many farmers have got self-binders and other labor-saving implements. Wages are apout $1.00 to $1.25 per day with board.

Robt. Vallance, Osnabruck, Stormont: Hands enough from 80 cents to $1.00 per day with board, by the month $20. A few self-binders coming into use.

James Cattanach, Lancaster, Glengarry: The supply of laborers for the harvest is sufficient. All with few exceptions have reapers, but there are only a few self-binders as yet. The rate of wages is generally higher on account of the O. and Q. railroad going on here just now; a dollar a day for the time worked.

Wm. McClintock, E. Hawkesbury, Prescott: The supply is equal to the demand; wages are somewhat higher than last year, $18 with board. Reapers are in general use. No self-binders; oats and pease are the chief grains, with enough wheat for family use, so it will not pay to get self-binders for the small quantity of wheat that is raised by one farmer.

P. R. McDonald, Osgoode, Carleton: The labor supply is better this season than the past few seasons; no trouble to get men at $15 to $16 per month and board. There will not be many self-binders sold here this season, but quite a few reapers will be sold.

James Findlay, Westmeath, Renfrew: Self-binders are very generally coming into use; they effect great saving of cut in harvesting.

A. F. Stewart, Beckwith, Lanark: Wages from $15 to $20 per month with board for six months according to quality of men. More binders and seeders sold than any other previous year.

Amos Howkins, Eldon, Victoria: On account of so many self-binders being introduced a good man can be got for $25 per month: before their introduction we had to pay $40 and over for one month in harvest. Domestic help rules high and quality poor at that; caused by so many going to the cities, where they say there is not so much drudgery as on a farm, and wages are higher.

M. McIntyre, North Monaghan, Peterborough: Labor supply is plentiful. Self-binders are used very much; most all farmers have them, and those that have not, employ them to cut their grain. Wages about $1.25 per day.

F. R. Curry, Anson, Haliburton: Wages $20 to $25 per month with board. Fair supply of labor. Quite a number of hay-rakes and mowers have been introduced into this district the last few years.

Wilmot Vandervoort, Rawdon, Hastings: There is no extra supply of farm help, and it is impossible to get a man for a day's work if you want one. Self-binders are coming into play very fast. They will be in general use in two or three years. Wages from $15 to $25 per month.

Anson Latta, Thurlow, Hastings: The labor supply I think was quite sufficient. There is a very limited number of self-binders. I think they will become more general when the reapers the farmers have on hand fail. Wages $1.00 per day or $20 per month.

Albert H. Smith, Monck, Muskoka: Plenty of labor. Mowers, reapers, rakes and railway forks are common enough. Wages $1.00 per diem with board.

Capt. D. Macfarlane, Foley, Parry Sound: Labor supply in haying sufficient. The hay rake is being introduced with good results. It will be some time yet before mowers become general. Wages about $1.25 per day with board.

A. McNabb, Thessalon, Algoma: Labor supply is sufficient. Labor-saving implements are not very plentiful yet. The average rate of wages is about $15 per month with board.

FROM THE NOVEMBER REPORT.

John Warnock, Tilbury West, Essex: There are plenty of farm laborers, but they seem to hold out for big wages or they won't work; wages must fall. Of domestic servants there are none, but plenty and to spare to marry.

L. E. Vogler, Zone, Kent: Yes, the supply was equal to the demand. Wages will fall on account of labor-saving machines. It is almost impossible to get any domestic servants; girls go to the United States (Detroit); better wages given.

Dugald Campbell, Dunwich, Elgin: Supply equal to demand I think wages must fall because farm products have fallen; if farm products continue at present market prices farm laborers' wages must come down accordingly, or farmers will be compelled to cease hiring. Domestic servants scarce.

L. M. Brown, S. Dorchester, Elgin: Supply and demand about equal. Remembering the fate of Wiggins and most other prophets, I will be cautious about predicting. When times generally improve wages will go up. Low prices have caused farmers to seed down more, raise less corn and roots, and generally hire less help on their farms. Self-binders have permanently lowered harvest wages; their ultimate effect will be merely to equalize wages through the season.

Robt. Watson, Windham, Norfolk: Supply about equal to the demand on account of so many binders in use. Wages are not likely to rise as farmers are paying higher wages than the price of grain would warrant them. Domestic servants are scarce.

Joseph Martindale, Oneida, Haldimand : Farm laborers plentiful. Wages will come lower ; self-binders giving great satisfaction, and also horse hay forks. Domestic servants are scarce.

G. E. Robertson, Wainfleet, Welland : Supply of domestic servants limited, largely owing to false ideas of respectability among women.

Wm. Young, Plympton, Lambton : Twice the number of farm hands would find employment at say $15 per month, but farmers prefer to do less work than pay $20 to $25. Good men will always get good wages, and if produce brought a better price wages would be higher. Domestic servants, none to get.

Robert Fleck, Moore, Lambton : Yes, supply equal to the demand. I think wages will not rise inasmuch as the use of improved implements lightens harvest work, and that has been the principal demand for laborers. Domestic servants very scarce.

G. Edwin Cresswell, Tuckersmith, Huron : Supply about equal to the demand, but there is a scarcity of certain kinds of what may be termed skilled labor—drainers and fencers for instance. Owing to the low price of farm produce I think wages will follow suit. If not, improvements will not be carried on to the same extent as formerly. Domestic servants scarce, and bad quality at that.

Jno. Scott, Howick, Huron : Supply equal to the demand. The rates of wages will remain as they have been for the last year, unless the price of farm products rises or falls ; undoubtedly wages will rise or fall in sympathy with the price of produce. There is a scarcity of domestic servants through the summer, but those who employ for the whole year find no difficulty in getting the requisite supply.

Jas. Tolton, Brant, Bruce : Plenty of farm laborers—all that were required. Self-binders being in pretty general use and other labor saving machines, wages I think will remain about as they are ; present prices of grain are too low for wages to advance. Domestic servants are scarce.

Hugh Murray, Bruce, Bruce : There did not appear to be the same demand for labor this year as usual, particularly in harvest. The supply was sufficient. Wages are not likely to increase unless there is a boom in farm produce. Farmers are paying more attention to stock raising, where less help is required. Domestic servants are scarce.

W. Totten, Keppel, Grey : The supply of farm laborers was equal to the demand. I do not think wages will rise, the price of all kinds of grain is too low and farmers will be forced to proceed cautiously. Domestic servants are scarce and in good demand.

Joseph Townsend, Sullivan, Grey : Supply equal to demand. Wages around here I think will rise. There are quite a number of young men gone to the States, and unless there is some influx men will be scarcer and require more pay. The supply of domestic servants is generally up to the demand.

Geo. Sneath, Vespra, Simcoe : The supply was equal to the demand. Wages more likely to fall than rise ; because, 1st, of the very low price of farm produce ; 2nd, hitherto a large number of men have been employed here in the timber business, which has now played out, and they will have to turn to farm work.

S. P. Zavitz, Lobo, Middlesex : Supply about equal to demand. Wages have by no means lowered as produce has, and if produce does not rise wages must lower, or farmers will do with less.

James A. Glen, Westminster, Middlesex : There was plenty of laborers. The season was very favorable to outdoor work and the harvest was light and easily handled. Wages will fall, as we have more labor-saving implements and there is less tillage every year and less pay for what is tilled. This section is fast becoming a pasture field. Domestics are still scarce, and that the scarcity has come to stay seems certain.

W. D. Stanley, Biddulph, Middlesex : Supply equal to demand. Wages rise during the fall and a great part of the summer, but will rule low during winter and harvest. The reason can be given in a few words : improved harvest machinery and very little chopping to be done in winter. Each cause will have a tendency to send surplus labor to where work can be found.

Thos. Baird, Blandford, Oxford : Farm help was never more plentiful, the supply being more than sufficient for the demand. Wages must come down : they are too high in proportion to the price of grain and as a consequence they must be lower yet for farmers to live. Domestics are scarce.

H. Chisholm, Brantford, Brant : Wages must fall ; the supply is greater than the demand, and besides farmers cannot afford to pay high wages when grain is selling at such a low figure.

Duncan Stewart, N. Easthope, Perth : Servant girls are scarce and many are disgusted with farming, when produce is so low that even when their wives and daughters are slaved and their lives shortened by everlasting work they are only by the utmost economy able to make both ends meet. A change has got to come or so many will leave the farm that the cities and towns will grow and need so much that the farmers left will get enough for their produce so they can get a living by working only as hard and as long as the town mechanic or laborer, whose present agitation is injuring the farm.

William Whitelaw, Guelph, Wellington ; Supply about equal to the demand. For first-class workmen, wages in my opinion will continue at about the present rate, as the demand for such seems to increase over the supply. But inferior no doubt will fall as the price of all kinds of farm produce is so low, and the demand for such labor is not great. Domestic servants not to be got for either love or money.

J. W. Gilmour, Peel, Wellington : The supply of farm laborers was at all times equal to the demand this year. If the supply continues as great as it is at present the rate of wages will go down, on account of the low price of grain and the number of binders introduced.

Christian T. Groh, Waterloo, Waterloo : The supply of laborers was equal to the demand. Wages will likely remain as they have been. Self-binders are reducing the number of hands required on farm in harvest, but new industries are springing up in villages, giving employment to all. Domestic servants are scarce ; all prefer working in factories to the farm. They will only consent to work on farm for a home for the future.

John H. Lindebury, Clinton, Lincoln : Farm labor sufficient but not too plentiful. Wages should not rise, for at present the men are doing better than their boss. Domestics are scarce and independent.

Robert Shearer, Niagara, Lincoln: Supply equal to demand. I do not know if wages will rise or fall, but one thing is certain: if prices do not rise farmers cannot much longer hire at present rates, or they will have to change places with their men. Supply of domestic servants are not at all equal to the demand.

George Hart, Saltfleet, Wentworth: The supply was hardly equal to the demand. The rate of wages will have to come down on account of the low price of all farm produce. Domestic servants are scarce.

John Shaw, Esquesing, Halton: The supply of farm laborers was quite sufficient. I think that the rate of wages is more likely to fall than rise—because prices of produce are low and labor-saving machinery is getting more generally used. There is a scarcity of good domestic servants.

W. T. Patullo, Caledon, Peel: The supply of farm laborers was sufficient. The rate of wages, in all probability will fall, as there are numerous labor-saving machines being used now, as the country is getting well cleared up—and the prices of all kinds of farm produce being unremunerative will also tend to lower wages. Domestic servants are a little too scarce, but not to a great extent.

James H. Newlove, Albion, Peel: Supply sufficient, although more would have been engaged had wages not been so high. Wages likely to fall as farmers cannot afford to pay the wages heretofore paid on account of the low price of grain. Scarcely any domestic servants to be had for money—plenty for love.

Angus Ego, Georgina, York: There were plenty of farm laborers this year. The self-binder has been the means of making labor easy to get, and at reasonable wages. In my opinion, wages must come down still further, on account of produce being so cheap. Domestic servants are very scarce; all the young girls in the country seem to want employment some other way besides working on the farm. That sort of work is not considered fashionable enough now for the young girls of our country.

E. Lanigan, Mara, Ontario: The supply of farm laborers was not equal to the demand this year. The rate of wages is likely to rise. Domestic servants scarce.

R. Forsyth, Pickering, Ontario: Plenty domestic servants, but a great many not worth their board; waste more than they earn.

H. A. Walker, Hope, Durham: Farm labor is sufficient for the demand. Wages must come down; farmers can't pay the wages—better leave a portion of their work undone. Domestic servants can't be got; plenty want to get married.

Wm. Lucas, Cartwright, Durham: There is an abundant supply of farm laborers, and little prospect of a rise in wages. The supply of female domestic servants is limited.

David Allan, Seymour, Northumberland: Laborers have been sufficient. Wages are likely to keep up, there being a good demand for shantymen. Domestic servants—very short supply.

Platt Hinman, Haldimand, Northumberland: Through the time of using machines there was plenty labor at fair prices, but scarce for threshing, gathering roots and fruit, and fall plowing. Wages will not rise; times cause many farmers to work hard to save men's wages and some impudence from the men. Domestic servants scarce, scarce, scarce—all ladies.

George N. Rose, N. Marysburgh, Prince Edward: A little scarce through harvest, but about equal the rest of the year. Wages will fall if anything, because farm produce is so low that farmers cannot afford to pay any more than at present. Domestic servants scarce; in fact can hardly be got for love or money.

C. R. Allison, S. Fredericksburg, Lennox: The supply of farm labor has been sufficient with the improved machinery now in use. I think that wages must come down if the present very low price of farm produce continues.

Robert Anglin, Pittsburg, Frontenac: Farm labor sufficient; farmers in general doing the work within themselves, improved machinery enabling them to do so. Binders and sulky plows are much in vogue. Domestic servants much wanted—very scarce; entering into housekeeping on their own account keeps the supply short.

M. Spoor, Wolfe Island, Frontenac: Supply not equal to demand. Wages likely to rise—caused by scarcity of laborers and combinations. Domestic servants scarce and wages very high.

John Elkington, M.D., Palmerston, Frontenac: Supply equal to demand. Wages likely to fall, the mines and mills having closed and the lumber merchants having only put in half the shanties this year.

Archd. Knight, Kingston, Frontenac: Supply equal to demand for the most part of the year. Wages are likely to be lower unless there will be a large amount of public works going on, for the farmer cannot pay high wages at the price farm produce is bringing. Domestic servants very scarce; about one-half of what are wanted.

John C. Stafford, Leeds and Lansdowne Rear, Leeds: The supply of farm laborers adequate. Wages likely to fall on account of improved machinery being introduced. The supply of girls as domestics is not equal to the demand, but if you want to marry they are plenty.

Wm. Y. Newman, Oxford, Grenville: The supply of farm laborers was fully equal to the demand. The rate of wages is likely to fall; improved machinery takes the place of manual labor. The supply of domestics is far short of the demand.

E. L. White, Winchester, Dundas: Laborers scarce. Wages likely to remain about the same. Domestic servants can't be obtained; girls all seeking for shop work.

James Clark, Kenyon, Glengarry: Supply equal to demand. The rate of wages is not likely to fall, as the Ontario and Quebec Railway is being built through our county and consequently commands the supply of extra labor. Domestic servants scarce; plenty of girls but few servants.

James Surch, South Plantagenet, Prescott: The supply of farm laborers was sufficient for the demand, although many left in the latter part of June. The rate of wages is not likely to rise as the timber business is dull.

Wm. Ferguson, West Hawkesbury, Prescott: Yes, the supply was enough for the demand through this year. I think wages will remain about as they are this fall. The supply of domestic servants is very limited, as mostly all the young women go off to the cities.

James Sieveright, Gloucester, Carleton: There has been a fair supply of farm laborers at the usual wages. Wages are not likely to rise. There is a fair supply of domestic servants.

Isaac Wilson, March, Carleton: Farm laborers plentiful this year on account of self-binders working satisfactorily. Wages must come down. Domestics scarce.

Wm. Doyle, Osgoode, Carleton: There were plenty of farm laborers. Wages are not apt to go any higher. Farmers would not be able to pay higher wages on account of all farm produce selling so low, and so many labor-saving machines coming into use.

H. A. Schultz, Sebastopol, Renfrew: Supply equal to demand. Wages are not very apt to fall, as long as work on railroads is to be had, for a great many laborers prefer that to farm work.

Peter Anderson, McNab, Renfrew: Wages likely to fall; lumbering operations not as brisk as usual. Domestic servants scarce.

Wm. Paterson, Ramsay, Lanark: Supply plentiful, except for digging drains. Wages likely to fall, owing to machinery. Domestic servants not to be had.

J. A. Jackson, Eldon, Victoria: The supply was quite equal to the demand. The rate of wages may not fall much, but I feel sure that it won't rise for some years, on account of the universal use of machinery and the low price of grain. Supply of domestic servants not equal to the demand.

Thos. Tellford, Ennismore, Peterboro': Supply equal to demand. Wages will fall because, with prices, we cannot contend with the west; more machinery will be used, the rough land let go to pasture and fewer hands will be required. Domestic servants sufficient.

D. Galloway, Lutterworth, Haliburton: The supply of farm laborers was equal to the demand. I see no reason why wages should rise or fall. No enquiry for domestic servants.

Geo. Monro, Tyendinaga, Hastings: Supply of farm laborers equal to the demand. Rate of wages must fall unless there is a change in the price of farm produce. Supply of domestic servants plenty in this part.

Donald Grant, Monck, Muskoka: Supply hardly equal to demand and so wages were higher than usual. Likely to rise as the lumber business is giving higher wages this winter. Domestic servants very scarce.

A. Wiancko, Morrison, Muskoka: In regard to supply of farm laborers I heard no complaint. Wages are rising, cause: demand for shantymen (lumbering). No lack of domestic servants.

URBAN LABOR, WAGES AND COST OF LIVING.

The collection of labor statistics in the industrial centres of the province during the past year has been carried on under exceptional circumstances. Shortly after the work began the provincial Legislature was dissolved, and in the excitement of a general election the collectors experienced much difficulty in gathering information, either from the employed or the employing classes. This was especially the case in the large cities, where the workingmen placed candidates of their own in the field, and where, in consequence, the differences between capital and labor became an expressed issue. The dissolution of the Dominion Parliament continued the political agitation until midwinter, and it was not until the feeling aroused by two keenly waged political contests had subsided that much progress was possible in the gathering of statistics. The general result, therefore, has been somewhat disappointing, for although a larger number of collectors were employed, and a larger number of towns embraced in the undertaking, the total number of returns is a little below that of the previous year. It is a hard matter to allay prejudices; some persons refuse to give information because they suspect the object to be a political one, bearing in some way on the subject of tariff legislation; others because they are hostile to the party in office in the province; others because they fear the Legislature has a scheme of direct taxation in view; and others because the amount of their earnings and the cost of their living is their own affair, and their spirit rises in revolt against what they regard as prying inquiry. There are many who understand the economic value of labor statistics, and who cheerfully supply the information called for in the schedules because they recognize the important service of facts in the study of the labor problem; but they are a small minority of the whole, and it does not seem at all probable that complete statistics can be obtained without the aid of a mandatory law. Yet it does not appear to be wise policy, in an enquiry of this kind, to resort

to force; for where the facts can only be known to the individual, as must be the case with respect to some of the most useful of them, it would be folly to exact the making of a return under penal constraint. The better plan appears to be, to depend on returns made at the individual's discretion; for besides the probability of their being more accurate when so supplied, they are likely to be furnished by the more intelligent workers and employers, who desire to contribute the data so essential to a fair and just consideration of all the interests involved.

WEEKLY WAGES.—In the collection of weekly wages for 1886 the schedule embraced the wages of one week only, the last full week of October, instead of an April and an October week as in previous years. This change was made partly to simplify the gathering of information, but chiefly because the results of inquiry in former years showed that there was practically no difference in the rates of April and October wages. The following table gives the number of persons whose earnings for the October week were obtained from employers and employés, and classed as males and females over and under 16 years:

Classes of workers.	Number of returns from—					
	Employers.		Employés.		Total.	
	1886.	1885.	1886.	1885.	1886.	1885.
Males over 16 years	12,933	13,552	2,453	2,384	15,386	15,936
Males under 16 years	861	1,215	29	65	890	1,280
Females over 16 years	2,494	2,876	241	345	2,735	3,221
Females under 16 years	224	213	21	17	245	230
Total	16,512	17,856	2,744	2,811	19,256	20,667

The number of employés for whom statistics of weekly labor were obtained in 1886 was 1,411 less than in 1885, being 1,344 less from employers and 67 less from employés. Of these the males over 16 returned by employers were 78 per cent. of the whole in 1886 and 76 per cent. in 1885, while in the returns made by employers themselves the number of males over 16 was 89 per cent. of the whole in 1886 and 85 per cent. in 1885. This disproportion accounts for the greater difference between the average earnings of males over 16 and of all classes, as given in a succeeding table, and also for the relatively high average earnings of all classes.

A further classification of the returns is made in the following table for each of three years, compiled from the statistics collected from employers only:

Year.	No. of Returns.	No. of workers.				Amount of wages.
		Sex.		Age.		
		Male.	Female.	Over 16.	Under 16.	
						$
1886	378	13,794	2,718	15,427	1,085	130,176
1885	494	15,240	3,095	16,678	1,657	143,532
1884	416	16,384	3,027	17,435	1,976	151,604

Here the proportion of female workers is nearly the same for each year, being 15½ per

cent. in 1884, 17 per cent. in 1885 and 16½ per cent. in 1886. The proportion of workers under 16 years, however, is more divergent, being 10 per cent. of the whole in 1884, 9 per cent. in 1885 and 6½ per cent. in 1886. These differences in the ratios of returns by classes of employés, together with the differences in the number of hours employed per week, doubtless account in the main part for the apparent increase of weekly wages of all classes, as shown in the table which follows:

Classes of workers.		Averages for October week per returns from—								
		Employers.			Employés.			Employers and employés.		
		Wages.	Hours employed.	Wages per hour.	Wages.	Hours employed.	Wages per hour.	Wages.	Hours employed.	Wages per hour.
		$ c.		cts.	$ c.		cts.	$ c.		cts.
Males over 16	1886	8 99	59.00	15.24	9 09	58.07	15.65	9 00	58.86	15.29
	1885	9 13	59.63	15.31	9 00	58.72	15.32	9 11	59.50	15.31
Males under 16	1886	2 92	55.75	5.24	2 84	58.86	4.83	2 92	55.85	5.23
	1885	2 93	49.84	5.87	2 86	61.43	4.69	2 93	50.43	5.81
Females over 16	1886	4 38	55.68	7.87	4 29	58.21	7.37	4 37	55.90	7.82
	1885	4 37	58.74	7.44	4 26	59.06	7.21	4 36	58.77	7.42
Females under 16	1886	2 23	57.51	3.88	2 60	59.67	4.36	2 26	57.70	3.92
	1885	2 50	56.20	4.45	2 79	57.65	4.84	2 52	56.31	4.48
All classes	1886	7 88	58.31	13.51	8 55	58.18	14.70	7 98	58.28	13.70
	1885	7 87	58.78	13.39	8 23	58.82	13.99	7 92	58.79	13.47

In this table are presented the averages of wages by classes of workers for the last full week of October, of the hours employed and of the wages per hour, for 1885 and 1886—computed from (1) the returns made by the employers, (2) the returns made by employés, and (3) the returns of employers and employés, together with the averages of all classes for both years. According to the returns of employers the rate of wages in 1886 was lower than in 1885 for all classes excepting females over 16 ; but the greatest decrease, which has occurred in the wages of males over 16 is only 14 cents per week, and for all classes there is an increase of one cent per week. According to the returns of employès the average wages of all classes is higher for each year than appears from the returns of employers, being 36 cents more in 1885 and 67 cents more in 1886. These differences are presumably owing to the fact that employers give returns covering the whole pay list, while the returns of employés are largely those of the better paid and more intelligent of the working classes. The average time employed per week is nearly the same according to both returns, the number of working hours being about half an hour less in 1886 than in 1885. The averages of wages, hours per week and wages per hour computed from the returns of employers and employés are of course affected by the larger proportion received from employers, and as they show an increase of the weekly wages and a decrease of the working hours, it follows that there is an increase in the wages per hour. It is very slight, however, being less than a quarter of one cent from 1885 to 1886.

The details of wages and hours employed for the October week are given by occupations in table XXVI for 1886, and in table XXVII for 1885 and 1886. An analysis of

these shows the average wages and the number of occupations over and under the average of each to be as follows, by classes of workers :

Classes of workers.	Average wages.		No. of occupations—					
			Over average.		Under average.		Total.	
	1886.	1885.	1886.	1885.	1886.	1885.	1886.	1885.
	$ c.	$ c.						
Males over 16	9 00	9 11	161	174	120	152	281	326
Males under 16	2 92	2 93	14	13	13	12	27	25
Females over 16	4 37	4 36	31	26	44	53	75	79
Females under 16	2 26	2 52	13	6	6	4	19	10
All classes	7 98	7 92	213	252	189	188	402	440

In this summary hotel employés and servants with board are not included, but their omission does not affect the general average of wages. Out of the 402 occupations represented in the table for 1886 there are 189, or 47 per cent., in which the average weekly earnings of workers was less than $7.98 per week ; while out of the 440 occupations in the table for 1885 there were 188, or 43 per cent., in which the average was less than $7.92.

Selecting the five principal trades which are represented in all the large wood and iron working industries of the province, we have the following comparison of weekly wages and working hours for the three years 1884-6 :

Classes.	1886.			1885.			1884.		
	Wages.	Hours employed.	Wages per hour.	Wages.	Hours employed.	Wages per hour.	Wages.	Hours employed.	Wages per hour.
	$ c.		cts.	$ c.		cts.	$ c.		cts.
Blacksmith	9 93	58.25	17.05	9 74	59.15	16.46	9 76	58.21	17.05
Carpenter	9 61	57.38	16.75	9 97	58.98	16.90	9 98	59.07	16.90
Machinist	9 83	59.62	16.49	10 16	59.14	17.18	10 08	59.17	17.03
Moulder	12 05	57.33	21.02	11 76	59.15	19.90	11 55	58.75	19.66
Painter	9 53	56.32	16.92	9 54	57.29	16.65	9 72	59.19	16.42
Average of the five trades.	10 22	57.81	17.68	10 26	58.94	17.41	10 30	58.95	17.47

The averages of these trades are nearly uniform for the three years, blacksmiths and moulders showing a small increase and the other trades a small decrease in wages, and all excepting machinists a decrease in the working hours. The average of the five trades indicates a reduction of a little over one hour in the week's working time of 1886, as compared with the two previous years, and though the average of wages is slightly less for the week it is higher per hour.

In the comparison of wages by occupations for successive years it will be found that averages in many instances are suspiciously wide apart—a consequence of their computation from few returns ; but averages computed from the aggregate of returns give surprisingly close results from year to year.

YEARLY EARNINGS AND COST OF LIVING.—The statistics of yearly earnings and cost of living, which are presented by occupations in table XXVIII, have been compiled from returns collected from 2,684 employés, residing in 24 towns and cities of the province, and representing 258 trades and branches of trades. In 1885 similar statistics were collected in 19 towns and cities from 2,637 employés, representing 269 trades, and in 1884 from the same number of towns from 2,835 employés, representing 204 trades. The detailed statistics of each town, if given separately, would cover at least 100 pages; but while such tabulation would lessen very materially the labor of compilation, it could serve no other useful purpose that is not served equally well by the table which gives the averages for all the towns and cities collectively. A condensed summary, however, will furnish interesting material for comparison; and while the statistics of each town are tempting subjects for comment, it is the object of this report to present facts with the utmost possible accuracy, leaving to the economist their use in the constructing of theories or in solving problems of government.

ALMONTE.—The aggregates and averages of the schedules collected at Almonte are exhibited in the following table, classified by sex and age, over and under 16 years, and with and without dependents:*

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	62	3,767	17,164	25,542	440	725	26,707	23,538	3,169
		Av...	....	60.76	276.84	411.97	7.10	11.69	430.76	379.65	51.11
Without dependents.	m.o.	Agg..	29	1,732	7,540	7,166	33	.....	7,199	5,152	2,047
		Av...	....	59.72	260.00	247.10	1.14	.....	248.24	177.66	70.58
	m.u.	Agg..	2	120	588	305	.....	...	305	282	23
		Av...	.. .	60.00	294.00	152.50	.. ...	.....	152.50	141.00	11.50
	f.o.	Agg..	29	1,750	8,033	5,472	72	.....	5,544	4,209	1,335
		Av...	....	60.34	277.00	188.69	2.48	.....	191.17	145.14	46.03
	f.u.	Agg..	4	240	1,095	468	.....	.....	468	459	9
		Av...	....	60.00	273.75	117.00	. ...	.....	117.00	114.75	2.25
All classes.....		Agg..	126	7,609	34,420	38,953	545	725	40,223	33,640	6,583
		Av...	....	60.39	273.17	309.15	4.33	5.75	319.23	266.98	52.25

For 1885 the returns for this town gave an average of 61 hours employed per week, and of 270 days in the year. The earnings of each worker, including $16.36 for wife and minor children, were $315.40, and the cost of living was $249.31; thus leaving for that year a surplus of $66.09, or $13.84 more than in 1886.

*The initials m. o., m. u., f. o. and f. u. in this and following tables are used to designate males and females *over* or *under* 16 years of age. The number of dependents in each table is exclusive of the worker.

BELLEVILLE.—The statistics for this city are computed from the returns of 48 employés.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	40	2,417	11,176	17,685	550	1,148	19,383	17,102	2,281
		Av...	....	60.43	279.40	442.13	13.75	28.70	484.58	427.55	57.03
	f.o.	Agg..	1	65	300	150	.....	.....	150	150	.. ..
		Av...	....	65.00	300.00	150.00	.....	.....	150.00	150.00	.....
Without dependents.	m.o.	Agg..	7	425	2,115	2,950	.....	.....	2,950	2,550	400
		Av...	....	60.71	302.14	421.43	.....	.....	421.43	364.29	57.14
All classes.....		Agg..	48	2,907	13,591	20,785	550	1,148	22,483	19,802	2,681
		Av...	....	60.56	283.15	433.02	11.46	23.92	468.40	412.54	55.86

The time employed was here 28 days more than in 1885, and the average of total earnings was greater by $45 ; but owing to an increase of nearly $50 in the cost of living the surplus of earnings was $5.07 less in 1886 than in 1885. The working time per week was 3.48 hours longer than in 1885.

BROCKVILLE.—This town presents statistics based on the returns of 275 workers, 68 per cent. of whom are males over 16, earning 72 per cent. of the total wages.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	188	10,877	51,065	77,005	3,420	1,008	81,433	72,495	8,938
		Av...	....	57.86	271.62	409.60	18.19	536	433.15	385.61	47.54
	f.o.	Agg.	2	112	560	735	99	.....	834	314	520
		Av...	....	56.60	280.00	367.50	49.50	.....	417.00	157.00	260.00
Without dependents.	m.o.	Agg..	47	2,699	11,805	15,472	734	.....	16,206	10,564	5,642
		Av...	....	57.43	251.17	329.19	15.62	.....	344.81	224.77	120.04
	f.o.	Agg..	38	2,168	11,418	8,600	388	.....	8,988	5,656	3,332
		Av...	....	57.05	300.47	226.32	10.21	.....	236.53	148.84	87.69
All classes.....		Agg.	275	15,856	74,848	101,812	4,641	1,008	107,461	89,029	18,432
		Av...	....	57.66	272.17	370.23	16.88	3.66	390.77	323.74	67.03

The short hour system appears to have been pretty generally adopted in Brockville, as the weekly average of last year is 5.32 hours less than in the preceding year. But owing to miners' strikes in the United States, which affected the employment of dock-laborers here, the average of time employed was 22 days less than in 1885, and although the amount of extra and wife and children's earnings was greater by $10.17, the average of total earnings was less by $35.87. The cost of living, however, was reduced by $31.14, so that the average surplus of 1886 was only $4.73 less than in 1885.

CHATHAM.—The Chatham statistics are compiled from 242 returns, and represent very completely the chief industries of that town.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents, m.o.		Agg..	157	9,575	41,948	68,494	2,360	2,810	73,664	63,021	10,643
		Av...	....	60.99	267.18	436.27	15.03	17.90	469.20	401.41	67.79
Without dependents.	m.o.	Agg..	56	3,410	15,433	21,181	577	.....	21,758	14,246	7,512
		Av...	....	60.89	275.59	378.23	10.30	.....	388.54	254.39	134.15
	f.o.	Agg..	29	1,689	7,636	5,323	.....	.....	5,323	5,220	103
		Av...	....	58.24	263.31	183.55	.....	.....	183.55	180.00	3.55
All classes		Agg..	242	14,674	65,017	94,998	2,937	2,810	100,745	82,487	18,258
		Av...	....	60.64	268.67	392.55	12.14	11.61	416.30	340.85	75.45

An industrial disturbance in this town had the effect of reducing the average working time by 5 days; but although the yearly wages from occupation was $17 less than in 1885, the increase of other earnings brought the total within $1.91 of the average of that year. The cost of living also was lessened by $19.53, whereby employés were enabled to save $17.62 more in 1886 than in 1885. The working time per week was the same for both years.

DUNDAS.—This town's statistics are based on the returns of 46 workers, 32 of whom were males over 16.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus or Deficit (-).
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	32	1,973	8,062	11,293	217	1,218	12,728	12,579	149
		Av...	....	61.66	251.94	352.91	6.78	38.06	397.75	393.09	4.66
	f.o.	Agg..	3	182	833	719	.....	63	782	906	-124
		Av...	....	60.67	277.67	239.67	.....	21.00	260.67	302.00	-41.33
Without dependents.	m.o.	Agg..	8	482	2,084	2,576	.....	.....	2,576	1,835	741
		Av...	....	60.25	260.50	322.00	.....	.....	322.00	229.38	92.62
	f.o.	Agg..	3	180	767	496	.....	.....	496	493	3
		Av...	....	60.00	255.67	165.33	.....	.....	165.33	164.33	1.00
All classes		Agg..	46	2,817	11,746	15,084	217	1,281	16,582	15,813	769
		Av...	....	61.24	255.35	327.91	4.72	27.85	360.48	343.80	16.72

Dundas has the unenviable distinction of giving the highest average of working hours per week of all towns from which statistics have been gathered, with the one exception of St. Thomas. It also shows the highest average earnings of wife and minor children, while its average surplus is lower than that of any other city or town excepting London and the grouped towns of St. Catharines, Merritton and Thorold. No statistics were

collected in Dundas in 1885, so that it is not possible to make a comparison with that year.

GALT.—Galt's statistics are compiled from the returns of male workers only, three-fourths of whom are with and one-fourth without dependents.

Classes by Sex and Age.		No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
					$	$	$	$	$	$
With dependents. . m.o.	Agg..	73	4,268	20,004	32,535	167	1,733	34,435	30,244	4,191
	Av...	....	58.47	274.03	445.69	2.29	23.74	471.72	414.30	57.42
Without dependents. m. o.	Agg..	26	1,529	6,925	9,316	191	.....	9,507	6,598	2,909
	Av...	....	58.81	266.35	358.31	7.35	.....	365.66	253.77	111.89
All classes.....	Agg..	99	5,797	26,929	41,851	358	1,733	43,942	36,842	7,100
	Av...	....	58.56	272.01	422.74	3.62	17.50	443.86	372.14	71.72

The averages of 1886 show very little change in comparison with those of 1885. The average time employed per week is reduced by one-fifth of an hour, and per year by 3.73 days. The wages from occupation are less by $5.11, but with an increase of 37 cents in extra earnings and of $6.79 in the earnings of wife and minor children, the total earnings show an increase of $2.05. The cost of living, however, is greater than in 1885 by $20.18, and the surplus less by $18.13.

GANANOQUE.—This town has given only 36 returns from employés, although one of the foremost among the smaller manufacturing towns of the province.

Classes by Sex and Age.		No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
					$	$	$	$	$	$
With dependents, m.o.	Agg..	18	1,079	4,697	7,848	220	62	8,130	7,408	722
	Av...	....	59.94	260.94	436.00	12.22	3.44	451.66	411.55	40.11
Without dependents. m.o.	Agg..	16	946	4,365	6,583	145	. . .	6,728	3,654	3,074
	Av...	....	59.13	269.06	411.44	9.06	.....	420.50	228.38	192.12
Without dependents. f.o.	Agg..	2	120	600	750	.....	.....	750	275	475
	Av...	....	60.00	300.00	375.00	.....	.....	375.00	137.50	237.50
All classes..	Agg..	36	2,145	9,602	15,181	365	62	15,608	11,337	4.271
	Av...	..	59.58	266.72	421.69	10.14	1.72	433.55	314.91	118.64

The time employed per week is 3.41 hours longer than in 1885, and the time per year less by 9 days; yet the average of total earnings is greater by $19.50. The cost of living is greater by $4.58, and the surplus by $13.92. It will be observed that the large surplus in this town is mainly the saving of workers without dependents, as out of the aggregate of $4,271 these make up $3,549.

GUELPH.—Guelph has furnished returns for 67 male workers, with an aggregate working time of 18,701 days and total earnings of $27,914, including $357 of wife and minor children's earnings.

Classes by Sex and Age.		No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
					$	$	$	$	$	$
With dependents, m.o.	Agg..	49	2,759	13,630	20,907	235	357	21,499	19,776	1,723
	Av...	....	56.31	278.16	426.67	4.80	7.29	438.76	403.59	35.17
Without dependents, m. o.	Agg..	18	1,038	5,071	6,365	50	.....	6,415	4,620	1,795
	Av...	....	57.67	281.72	353.61	2.78	....	356.39	256.67	99.72
All classes.....	Agg..	67	3,797	18,701	27,272	285	357	27,914	24,396	3,518
	Av...	....	56.67	279.12	407.05	4.25	5.33	416.63	364.12	52.51

Compared with the statistics of 1885 the average time per week is longer by three-quarters of an hour, and the time per year by 13 days. The total earnings also show an increase of $34.67, and the cost of living an increase of $31.14; consequently the surplus stands at nearly the same figure as in 1885, exceeding it by $3.53.

HAMILTON.—This city, although one of the foremost manufacturing centres in the province and canvassed by intelligent and experienced collectors, gives returns for only 175 workers. This is the more surprising in view of the fact that labor there is well organized, and that the labor organizations have been foremost in urging upon government the collection and tabulation of statistics on trade and labor. But, like their fellows of Toronto, the workingmen of Hamilton were immersed in politics during almost the whole period in which the labor statistics of the city were being gathered, and the reports of the collectors show that the work of procuring returns was seriously hampered in consequence. The statistics of the city, compiled from the schedules obtained under the circumstances referred to, are as follows:

Classes by Sex and Age.		No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
					$	$	$	$	$	$
With dependents.. m.o.	Agg..	129	7,155	27,988	54,352	1,589	1,993	57,934	54,792	3,142
	Av...	....	55.47	216.96	421.33	12.32	15.45	449.10	424.74	24.36
Without dependents. m. o.	Agg..	38	2,083	8,402	13,027	277	.....	13,304	11,302	2,002
	Av...	....	54.82	221.11	342.82	7.29	.....	350.11	297.42	52.69
f.o.	Agg..	8	428	2,087	2,008	.....	.....	2,008	1,710	298
	Av...	....	53.50	260.88	251.00	.....	.....	251.00	213.75	37.25
All classes.....	Agg..	175	9,666	38,477	69,387	1,866	1,993	73,246	67,804	5,442
	Av...	....	55.23	219.87	396.50	10.66	11.39	418.55	387.45	31.10

Compared with the returns of the previous year, the time employed per week was lessened by one hour and the time per year by 16 days—the latter as the result of a labor disturbance. The average of yearly earnings from occupation was also reduced by $32.56, but other earnings brought the difference between the two years to $21.62. The

cost of living was also lessened by $11.74, so that the surplus of last year fell short of the surplus of 1885 by only $9.88.

HESPELER, PRESTON AND ELORA.—These three towns, which are the seats of a few active industries, give returns for 66 employés, presenting aggregates and averages as follow :

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents..m.o.		Agg..	34	1,994	8,971	12,675	163	1,513	14,351	13,588	763
		Av...	....	58.65	263.85	372.80	4.79	44.50	422.09	399.65	22.44
Without dependents.	m.o.	Agg..	21	1,255	5,993	6,366	275	.....	6,641	5,145	1,496
		Av...	....	59.76	285.38	303.14	13.10	.....	316.24	245.00	71.24
	f.o.	Agg..	11	660	2,885	1,678	.....	.....	1,678	1,524	154
		Av...	....	60.00	262.27	152.55	.....	.....	152.55	138.55	14.00
All classes		Agg..	66	3,909	17,849	20,719	438	1,513	22,670	20,257	2,413
		Av...	....	59.23	270.44	313.92	6.64	22.92	343.48	306.92	36.56

The returns of 1885 are for the town of Hespeler only, consequently no figures are available for comparison.

KINGSTON.—For this city the number of schedules collected with data sufficient for tabulation was 188, representing by occupations the labor of males and females over and under 16 years for an aggregate of 55,558 days.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents..m.o.		Agg..	131	7,824	38,439	59,389	505	1,582	61,476	54,388	7,088
		Av...	....	59.73	293.43	453.35	3.86	12.08	469.29	415.18	54.11
Without dependents.	m.o.	Agg..	39	2,242	12,009	13,209	314	.....	13,523	10,649	2,874
		Av...	....	57.49	307.92	338.69	8.05	.....	346.74	273.05	73.69
	m.u.	Agg..	5	288	1,500	806	15	.....	821	821	.....
		Av...	....	57.60	300.00	161.20	3.00	.....	164.20	164.20	.....
	f.o.	Agg..	6	360	1,610	1,217	.....	.....	1,217	1,125	92
		Av...	....	60.00	268.33	202.83	.....	.....	202.83	187.50	15.33
	f.u.	Agg..	7	420	2,000	1,050	.....	.....	1,050	1,050	.....
		Av...	....	60.00	285.71	150.00	.....	.....	150.00	150.00	.....
All classes.....		Agg..	188	11,134	55,558	75,671	834	1,582	78,087	68,033	10,054
		Av...	....	59.22	295.52	402.51	4.44	8.41	415.36	361.88	53.48

The average time per week is nearly 3 hours less than in 1885, and per year it is more by 23 days. The average of yearly wages from occupation is also in excess of the average of 1885 by $52.11, but other earnings in the latter year reduce the difference between the totals to $47.76. With the increase of revenue in 1886, however, there was a corres

ponding increase in the cost of living, as a result of which the average saving of the year was only $5.51 more than in 1885.

LONDON.—The London returns are fairly representative of both sexes, with and without dependents, the total being 249.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus or Deficit (-).
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	149	8,143	40,364	58,522	1,292	3,592	63,406	62,519	887
		Av...	....	54.65	270.90	392.76	8.67	24.11	425.54	419.59	5.95
	f.o.	Agg..	3	162	800	625	20	.....	645	689	-44
		Av...	....	54.00	266.67	208.33	6.67	.....	215.00	229.67	-14.67
Without dependents.	m.o.	Agg..	65	3,497	16,899	16,931	143	.....	17,074	14,801	2,273
		Av...	....	53.80	259.98	260.48	2.20	.....	262.68	227.71	34.97
	m.u.	Agg..	2	106	588	234	.....	.....	234	234	.....
		Av...	....	53.00	294.00	117.00	.....	.....	117.00	117.00	.....
	f.o.	Agg..	29	1,569	7,806	4,022	79	.....	4,101	4,331	-230
		Av..	....	54.10	269.17	138.69	2.72	.....	141.41	149.34	-7.93
	f.u.	Agg..	1	53	312	65	.....	.....	65	65	.....
		Av...	....	53.00	312.00	65.00	....	.....	65.00	65.00	.....
All classes.....		Agg..	249	13,530	66,769	80,399	1,534	3,592	85,525	82,639	2,886
		Av...	....	54.34	268.15	322.89	6.16	14.43	343.48	331.89	11.59

Here the time per week is 4.21 hours less than in 1885, but the time per year is longer by $9\frac{1}{4}$ days. The average earnings from occupation, however, show an increase of only $2.29, which is probably a result of the adoption of the short hour system. The total earnings are larger in 1886 by $3.71, and the cost of living is more by $37.35. As a consequence the surplus of $45.23 in 1885 is lowered to a surplus of $11.59 in 1886.

OSHAWA.—The returns for Oshawa are made up from 64 males with and 16 males without dependents, as follows:

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	64	3,636	15,687	24,930	243	88	25,261	24,934	327
		Av...	....	56.81	245.11	389.53	3.80	1.37	394.70	389.59	5.11
Without dependents.	m.o.	Agg..	16	925	3,807	5,225	64	.....	5,289	3,875	1,414
		Av...	....	57.81	237.94	326.56	4.00	.....	330.56	242.19	88.37
All classes		Agg .	80	4,561	19,494	30,155	307	88	30,550	28,809	1,741
		Av...	....	57.01	243.68	376.94	3.84	1.10	381.88	360.11	21.77

In the time employed per week there is a reduction of $1\frac{1}{2}$ hours, while in the time per year there is an increase of 19.41 days. A corresponding increase is observable in the yearly wages from occupation, the average being $49.67. In the total earnings the

increase of 1886 over 1885 is $50.17. There is also the corresponding increase in the cost of living which is found to almost invariably accompany an increase of earnings, the average of 1885 being $322.69, and of 1886, $360.11, so that the balance of last year is only $12.75 more than the balance of the previous year.

OTTAWA.—Only 35 returns have been received from Ottawa, of whom 23 are males over 16 without dependents.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents..m.o.		Agg..	23	1,392	7,030	11,635	.....	396	12,031	10,473	1,558
		Av...	....	60.52	305.65	505.87	.....	17.22	523.09	455.35	67.74
Without dependents.	m.o.	Agg..	8	480	2,448	3,779	.....	.....	3,779	2,633	1,146
		Av...	....	60.00	306.00	472.38	.....	.....	472.38	329.13	143.25
	f.o.	Agg..	4	216	1,252	1,158	.....	.....	1,158	840	318
		Av...	....	54.00	313.00	289.50	.....	.....	289.50	210.00	79.50
All classes.....		Agg..	35	2,088	10,730	16,572	.....	396	16,968	13,946	3,022
		Av...	....	59.66	306.57	473.49	.....	11.31	484.80	398.46	86.34

The average time per week is 1½ hours less than in 1885 and 4½ days longer per year. The total earnings are greater than in 1885 by $22.24 and the cost of living by $32.52, so that the surplus is less by $10.28.

PETERBOROUGH.—The statistics for this town are computed from returns for 87 males and 3 females over 16 and one male under 16.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents. m.o.		Agg..	50	2,946	13,592	22,549	750	494	23,793	21,337	2,456
		Av...	....	58.92	271.84	450.98	15.00	9.88	475.86	426.74	49.12
Without dependents.	m.o.	Agg..	37	2,183	9,741	11,892	141	.....	12,033	8,764	3,269
		Av...	....	59.00	263.27	321.41	3.81	.....	325.22	236.86	88.36
	m.u.	Agg..	1	60	300	175	.....	.....	175	150	25
		Av..	....	60.00	300.00	175.00	.....	.....	175.00	150.00	25.00
	f.o.	Agg.	3	156	850	435	.....	.....	435	376	59
		Av...	....	52.00	283.33	145.00	.....	.....	145.00	125.33	19.67
All classes.....		Agg..	91	5,345	24,483	35,051	891	494	36,436	30,627	5,809
		Av...	.. .	58.74	269.04	385.18	9.79	5.43	400.40	336.56	63.84

Compared with 1885 the average time per week is less by two-thirds of an hour, and per year by 34⅓ days. The earnings from occupation are also less by $43.15, but extra earnings and the earnings of wife and children reduce the difference per employé to $29.33. The cost of living denotes an economy in keeping with the curtailed revenue,

for the average is $45.31 less than in 1885; hence the employés of this town are able, in spite of the smaller earnings, to show a surplus greater than in 1885 by $16.

St. Catharines, Thorold and Merritton.—For these three towns we have returns from 134 employés, 112 of whom are males and 22 females.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus or Deficit (-).
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	81	4,876	21,511	31,497	587	1,311	33,395	32,269	1,126
		Av..	....	60.20	265.57	388.85	7.25	16.18	412.28	398.38	13.90
	f.o.	Agg..	3	174	890	641	.....	.....	641	653	-12
		Av...	....	58.00	296.67	213.67	.....	.....	213.67	217.67	-4.00
Without dependents.	m.o.	Agg..	25	1,544	5,737	6,680	330	.....	7,010	6,891	119
		Av...	....	61.76	229.48	267.20	13.20	.....	280.40	275.64	4.76
	m.u.	Agg..	6	342	1,100	498	.....	.....	498	498	.....
		Av...	....	57.00	183.33	83.00	.....	.....	83.00	83.00	.....
	f.o.	Agg..	18	1,050	3,840	2,515	.....	.....	2,515	2,465	50
		Av...	....	58.33	213.33	139.72	.....	.....	139.72	136.94	2.78
	f.u.	Agg..	1	60	250	147	.....	.....	147	147	.....
		Av...	...	60.00	250.00	147.00	.....	.....	147.00	147.00	.....
All classes.....		Agg..	134	8,046	33,328	41,978	917	1,311	44,206	42,923	1,283
		Av...	....	60.04	248.69	313.27	6.84	9.78	329.89	320.32	9.57

No returns of yearly statistics were obtained for these towns in 1885, and consequently no comparison can be made with the state of the working classes in that year. Compared with the averages of the province, as appears in one of the tables which follow, it will be seen that in time employed, wages earned and cost of living the three towns of the Welland canal are from 8 to 17 per cent. lower.

St. Thomas.—This city, in spite of a strong labor organization, gives returns for only 31 persons, and there is reason to believe that it was well canvassed.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	23	1,424	6,359	10,138	290	60	10,488	10,243	245
		Av...	....	61.91	276.48	440.78	12.61	2.61	456.00	445.35	10.65
Without dependents.	m.u.	Agg..	8	506	2,100	2,948	50	.....	2,998	2,204	794
		Av...	....	63.25	262.50	368.50	6.25	...	374.75	275.50	99.25
All classes.....		Agg..	31	1,930	8,459	13,086	340	60	13,486	12,447	1,039
		Av...	....	62.26	272.87	422.13	10.97	1.93	435.03	401.52	33.51

The average working time per week is 4 hours more than the average of the province, yet it is 1½ hours shorter than in 1885. The time per year is longer than in 1885 by 3⅓ days, but the total earnings are less by $22.16. The cost of living is also less by $9.23, and the average surplus less by $12.93.

STRATFORD.—The statistics of Stratford have been computed from returns furnished by 172 workers, all but 17 of whom are females.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	90	5,516	27,184	43,034	973	1,212	45,219	37,619	7,600
		Av...	....	61.29	302.04	478.15	10.81	13.47	502.43	417.99	84.44
Without dependents.	m.o.	Agg..	61	3,646	18,299	18,995	75	.....	19,070	15,609	3,461
		Av...	....	59.77	299.98	311.39	1.23	.....	312.62	255.88	56.74
	m.u.	Agg..	4	252	1,232	292	.....	.....	292	292	.....
		Av...	....	63.00	308.00	73.00	.....	.....	73.00	73.00	.....
	f.o.	Agg..	14	795	3,950	2,714	110	.....	2,824	2,369	455
		Av..	....	56.79	282.14	193.86	7.85	.....	201.71	169.21	32.50
	f.u.	Agg..	3	180	903	370	.....	.....	370	370	.....
		Av...	....	60.00	301.00	123.33	.....	.....	123.33	123.33	.....
All classes.....		Agg..	172	10,389	51,568	65,405	1,158	1,212	67,775	56,259	11,516
		Av...	....	60.40	299.81	380.26	6.73	7.05	394.04	327.09	66.95

Here, as in St. Thomas, the large proportion of railway employés serve to give a high average of working hours per week, which is two-thirds of an hour longer than in the preceding year. The average time per year is also longer by 11 days, yet the average of wages from occupation is less by $23.51. With larger extra earnings and the earnings of wife and minor children, however, the total earnings per employé in 1886 are only $17.26 less than in 1885. The cost of living shows an increase of $4, but the average surplus is less by $21.26.

TORONTO.—This city gives returns for 355 workers, nearly all of whom are males with dependents.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus or deficit (-).
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	197	11,106	53,676	91,927	1,471	2,613	96,011	93,616	2,395
		Av...	....	56.38	272.47	466.64	7.47	13.26	487.37	475.21	12.16
	f.o.	Agg..	2	101	465	566	....	80	646	554	92
		Av...	....	50.50	232.50	283.00	.....	40.00	323.00	277.00	46.00
Without dependents.	m.o.	Agg..	150	8,419	40,431	62,398	275	.....	62,673	49,996	12,677
		Av...	....	56.13	269.54	415.99	1.83	.....	417.82	333.31	84.51
	m.u.	Agg..	1	48	305	200	.....	.....	200	200	.....
		Av...	....	48.00	305.00	200.00	.....	.....	200.00	200.00	.....
	f.o.	Agg..	5	252	1,235	888	.....	.....	888	889	-1
		Av...	....	50.40	247.00	177.60	....	.....	177.60	177.80	-0.20
All classes.....		Agg..	355	19,926	96,112	155,979	1,746	2,693	160,418	145,255	15,163
		Av...	....	56.13	270.74	439.38	4.92	7.58	451.88	409.17	42.71

In 1885 a much larger proportion of workers who filled up the schedules were males without and females with and without dependents, and consequently a comparison of averages computed from the returns of all classes would be unfair in almost every particular excepting the time employed. Taking, however, the class of male workers with dependents, the averages throughout preserve close parallels. The time per week in 1886 is longer than in 1885 by 1.21 hours, notwithstanding the agitation kept up by several trades for short hours, while the time per year is less by an average of 1.21 days. The earnings from occupation are greater by $4.51, but with a lower average of extra and wife and children's earnings the average total earnings in 1886 is $3.60 less per worker than in 1885. The cost of living is also greater by $34.27, so that while the average surplus of 1885 was $46.43 the average of 1886 was only $12.16.

Woodstock.—The Woodstock statistics are computed from 169 returns, only 10 of whom are females.

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus.
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	116	6,855	33,478	48,092	618	642	49,352	44,363	4,989
		Av...	....	59.09	288.60	414.59	5.33	5.53	425.45	382.44	43.01
	f.o.	Agg..	2	88	512	350	.....	150	500	485	15
		Av...	....	44.00	256.00	175.00	.....	75.00	250.00	242.50	7.50
Without dependents.	m.o.	Agg..	43	2,547	11,749	14,687	148	. . .	14,835	11,847	2,988
		Av...	....	59.23	273.23	341.56	3.44	.....	345.00	275.51	69.49
	f.o.	Agg .	8	468	2,370	1,380	24	.....	1,404	1,317	87
		Av...	....	58.50	296.25	172.50	3.00	.....	175.50	164.63	10.87
All classes.....		Agg..	169	9,958	48,109	64,509	790	792	66,091	58,012	8,079
		Av...	....	58.92	284.67	381.71	4.67	4.69	391.07	343.26	47.81

The averages for this town run very closely in line with the averages of the province, saving that the time employed per year is longer by 14 days. The earnings from occupation are only 12 cents less than the provincial average, the total earnings less by $7.74, the cost of living less by $7.10, and the surplus less by 64 cents. No statistics were collected in Woodstock in 1885.

The averages of all the foregoing towns and cities for 1886, together with the provincial averages of the two preceding years, are presented in the following table, classified by sex and age and with and without dependents :

Classes by Sex and Age.			No. of Returns.	Hours employed per week.	Days employed in year.	Yearly wages.	Extra earnings.	Wife and minor children's earnings.	Total earnings.	Cost of living.	Surplus or deficit ( ).
						$	$	$	$	$	$
With dependents.	m.o.	Agg..	1,706	99,522	462,025	730,049	16,090	24,557	770,696	706,304	64.392
		Av....	.....	58.34	270.82	427.93	9.43	14.40	451.76	414.01	37.75
		1885..	.....	58.76	268.42	427.89	9.05	15.31	452.25	405.08	47.17
		1884..	.....	59.05	263.42	420.40	5.55	10.34	436.29	394.29	42.00
	f.o.	Agg..	16	884	4,360	3,786	119	293	4,198	3,751	447
		Av....	.....	55.25	272.50	236.63	7.44	18.31	262.38	234.44	27.94
		1885..	.....	57.86	287.41	195.03	.....	.....	195.03	189.07	5.96
		1884.	.....	58.57	254.93	201.98	1.36	7.27	210.61	224.86	-14.25
	m.u.	Agg..	718	41,588	192,893	247,746	3,825	.....	251,568	192,935	58.633
		Av....	.....	57.92	268.65	345.05	5.32	.....	350.37	268.71	81.66
		1885..	.....	59.39	272.97	349.02	4.30	.....	353.32	259.91	93.41
		1884..	.....	59.05	269.32	331.29	2.83	.....	334.12	252.27	81.84
Without dependents.	m.u.	Agg..	21	1,216	5,613	2,510	15	.....	2,525	2,477	48
		Av....	.....	57.90	267.29	119.52	0.72	.....	120.24	117.95	2.29
		1885..	.....	59.29	273.14	129.46	0.50	.....	129.96	121.83	8.13
		1884..	.....	62.00	287.73	133.09	0.45	.....	133.54	138.91	-5.37
	f.o.	Agg..	207	11,861	56,339	38,656	673	.....	39,329	32,799	6,530
		Av....	.....	57.30	272.27	186.75	3.25	.....	190.00	158.45	31.55
		1885..	.....	57.98	283.03	181.06	1.37	.....	182.43	155.91	26.52
		1884..	.....	59.65	266.24	177.49	0.33	.....	177.82	166.34	11.48
	f.u.	Agg..	16	953	4,568	2,100	.....	.....	2,100	2,091	9
		Av....	.....	59.56	285.00	131.25	.....	.....	131.25	130.69	0.56
		1885..	.....	57.14	265.59	126.80	.....	.....	126.80	117.64	9.16
		1884..	.....	60.46	267.69	97.15	.....	.....	97.15	107.92	-10.77
All classes.....		Agg..	2,684	156,024	725,790	1,024,847	20,719	24,850	1,070,416	940,357	130,059
		Av....	.....	58.13	270.41	381.83	7.72	9.26	398.81	350.36	48.45
		1885..	.....	58.85	271.28	372.98	6.72	9.15	388.85	332.50	56.35
		1884..	.....	59.10	265.17	372.29	4.33	6.69	383.31	334.47	48.84

The statistics of 1886 give the aggregate quantities under each head, as well as the averages, from which it will be seen that the total number of days for which earnings stand are the equivalent of 2,000 years. The total earnings of the 2,684 workers making returns for that year are $1,024,847 from trade or occupation, and this amount is supplemented by $45,569 from the extra earnings of workers themselves and the earnings of wives and minor children. Of the total workers, however, there are 1,722 with and 962 without dependents, and the cost of living to all workers for the year, including their dependents, was $940,357. This leaves a surplus of $130,059, or more than 12 per cent. of the total earnings, of which $64,839 belongs to workers with dependents and $65,220 to workers without dependents. In the principal class of workers, viz., males with dependents, the statistics of the three years 1884-6 show a very steady uniformity, both in time and earnings. The time per week has been shortened by nearly three-quarters of an hour, while the time per year increased by 5 days from 1884 to 1885 and by 2.4 days from 1885 to 1886. Wages from occupation increased also in the

second year over the first by $7.50, and remained almost stationary during the second and third years. Total earnings, however, show an increase of $16 in the second year and a very small decrease in the third. In the cost of living the increase has been continuous, the second year being $10.79 more than the first and the third $8.93 more than the second. The average surplus moves within a narrow circle, being $42 for 1,859 workers in 1884, $47.17 for 1,605 in 1885, and $37.75 for 1,706 in 1886. The averages for all classes are also nearly constant for the three years. These are based on returns from 2,853 workers in 1884, 2,637 in 1885 and 2,684 in 1886. The time per week is shorter by very nearly one hour in the third than in the first year, and the time per year is longer by 5 days. Wages from occupation are nearly equal in the first and second years, but show an increase of about $9 in the third year—owing, it may be assumed, to the larger proportion of returns from males with dependents obtained in Toronto that year than in either of the others. The relation of total earnings to cost of living is steadily maintained throughout the three years, and there is consequently little change in the amount of savings or surplus; capital, of necessity, accumulates very slowly in the ranks of the working classes.

Of items which make up the cost of living the principal ones are rent, fuel, clothing and food. In the following table the average cost under these heads is shown for each town per worker with dependents, and also the average cost of clothing and total cost of living for workers without dependents:

Towns.	Owner.	Tenant.	Boarder.	Average per worker with dependents.							Average per worker without dependents.	
				No. of dependents.		Rent.	Fuel.	Clothing per capita.	Food per capita.	Total cost of living per capita.	Clothing.	Total cost of living.
				Total.	Under 16.							
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Almonte	30	31	65	3.23	2.00	65 87	37 42	17 02	42 32	89 84	48 79	157 84
Belleville	13	24	11	2.90	1.83	70 13	38 57	23 27	56 43	107 82	110 00	364 29
Brockville	55	133	87	4.58	3.29	61 32	60 43	13 09	32 85	68 62	50 82	190 82
Chatham	59	91	92	3.59	2.20	68 62	28 17	21 53	43 23	87 53	66 33	229 01
Dundas	10	24	12	3.37	1.94	50 57	39 36	14 93	51 69	88 14	57 44	211 64
Galt	33	40	26	3.58	2.11	68.05	40 46	16 69	50 74	90 55	56 82	253 77
Gananoque	13	5	18	3.72	2.44	50 00	43 03	19.78	53 59	87 16	66 18	218 28
Guelph	18	28	21	4.41	2.92	70 11	41 31	14 90	35 36	74 62	63 57	256 67
Hamilton	33	94	48	3.82	2.67	76 56	41 31	16 45	53 65	88 09	70 81	282 87
Hespeler, Preston and Elora	11	22	33	3.74	2.32	55.52	38 23	21 32	40 79	84 40	46 87	208 40
Kingston	30	100	58	3.62	2.04	70 46	36 09	18 12	43 91	89 90	63 40	239 38
London	70	77	102	3.89	2.31	73 62	40 69	17.66	45 73	85 07	57 09	200 32
Oshawa	13	51	16	3.64	2.30	58 63	38 37	13 94	46 05	83 95	54 67	242 18
Ottawa	9	14	12	4.17	2.78	81 43	34 69	21 96	35 46	88 01	25 00	289 42
Peterborough	13	34	44	3.56	2.22	72 09	34 79	19 47	50 79	93 58	52 78	226 59
St. Catharines, Merritton and Thorold	22	58	54	3.51	1.99	50 77	44 10	15 90	43 76	86 87	56 94	200 03
St. Thomas	7	14	10	3.22	2.04	86 46	41 35	22 42	56 85	105 60	78 75	275 50
Stratford	32	53	87	3.18	2.08	69 38	38 41	27 88	41 75	100 05	72 71	227 31
Toronto	22	167	166	3.08	1.94	92 87	40 90	23 96	54 32	116 12	89 02	327 47
Woodstock	47	70	52	3.27	2.09	76 34	40 49	20 83	42 30	88 98	57 80	258 12
The Province. 1886	540	1,130	1,014	3.64	2.31	71 52	41 21	18 84	44 42	88 96	64 85	239 40
The Province. 1885	....	.....	.....	3.54	2.26	74 41	40 53	19 03	47 67	88 36	55 09	225 71

The table also gives a classification of workers who made returns showing that 540 are owners of the dwellings they occupy, 1,130 are tenants and 1,014 are boarders. The statistics of rent, fuel, etc., are necessarily compiled from the returns of owners and tenants. These exhibit considerable diversity in the several towns, due, no doubt, to local circumstances; but it will be observed that under the head of total cost of living per capita the range of variation is closely narrowed. In two-thirds of the towns it is over $83 and under $90, in two it is over $68 and under $75, and in four it is over $100. Yet when the averages for all the towns are compared for 1885 and 1886, the difference is only 60 cents per capita. The worker without dependents maintains a high average for his clothing, while his total cost of living is more than one-half that of the worker with nearly four persons besides himself to provide for.

Taking the principal industries, the following table shows for each the average per worker of dependents, time employed, yearly earnings and cost of living:

Industries.	No. of dependents.		Time employed.		Yearly earnings.								Cost of living			
	Total.	Under 16.	Hours per week.	Days in year.	Wages from occupation.		Extra.		Wife and minor children's earnings.		Total.		Total.		Per capita.	
					$	c.	$	c.	$	c.	$	c.	$	c.	$	c.
Agr'l implement works	3.13	2.15	58.51	245.95	379	86	15	26	3	33	398	45	351	53	85	09
Agr'l hand implem'nt works	3.59	2.35	56.12	233.47	380	89	10	29	0	47	391	65	387	64	84	49
Boot and shoe factory	1.89	1.16	55.02	274.00	310	47	4	31	25	57	340	35	309	86	107	35
Brewery	1.76	1.06	62.12	307.71	322	56	4	82	23	94	351	32	298	59	108	00
Carriage works	2.55	1.61	58.67	268.41	431	99	7	10	5	38	444	47	358	71	101	17
Cigar factory	1.03	0.68	50.61	244.26	311	85	1	20	1	91	314	96	295	29	145	19
Cotton mill	1.22	0.72	60.33	259.11	252	67	.....		8	92	261	59	241	59	108	71
Foundry and machine shop	3.01	1.91	58.42	270.82	443	58	6	93	14	37	464	88	409	82	102	13
Furniture factory	2.29	1.50	58.88	279.56	403	30	5	76	8	18	417	24	372	27	113	16
Glass factory	3.25	2.30	44.40	184.95	530	51	14	06	3	90	548	47	480	55	113	07
Hotel (with board)	0.97	0.64	71.03	328.22	212	97	9	75	6	94	229	66	183	94	93	27
Lumber mill	3.38	2.25	59.67	270.46	405	83	10	21	13	96	430	00	376	29	86	01
Newspaper	1.69	1.04	58.05	285.49	438	49	9	93	8	50	456	92	411	20	153	11
Organ factory	2.55	1.68	58.03	289.83	464	92	5	32	....		470	24	387	40	109	18
Railway (road)	3.24	2.36	63.45	307.87	541	79	3	82	5	51	551	12	408	88	96	35
Railway (shop)	3.40	1.99	55.57	285.63	409	08	8	02	12	91	430	01	392	68	89	31
Sewing machine factory	3.46	1.92	54.54	280.92	382	28	1	92	....		384	20	403	38	90	41
Stove foundry	3.97	2.67	59.54	284.74	426	82	4	56	4	05	435	43	398	81	80	17
Tailor shop	1.07	0.60	56.37	262.58	292	20	6	22	1	11	299	53	246	47	118	90
Tannery	3.22	1.84	58.94	292.28	407	40	0	31	9	38	417	09	372	21	88	23
Woollen mill	1.32	0.83	59.58	277.80	284	71	1	89	7	04	293	64	250	81	108	05

Of these industries there are three in which the average time employed per week is less than 55 hours, viz., cigar, glass and sewing machine factories; in the two classes of agricultural implement works, boot and shoe factories, carriage works, foundry and machine shops, furniture factories, lumber mills, newspapers, organ factories, railways (shop employés), stove foundries, tailor shops, tanneries and woollen mills, the average is over 55 and less than 60 hours; in breweries, cotton mills and railways (road employés) the average is over 60 and less than 65 hours, and in hotels only the average is over 70

hours. There are four industries in which the average time per year is under 250 days, six in which it is 250 to 275 days, eight in which it is 275 to 300 days and three in which it is over 300 days. In wages from trade or occupation, exclusive of extra earnings, there are four in which the average is under $300, six in which it is $300 to $400, nine in which it is $400 to $500 and two in which it is over $500. There are six in which the average cost of living per worker is under $300, ten in which it is $300 to $400 and five in which it is over $400; while in nine the cost of living per capita ranges from $80 to $100 and in twelve it is over $100. The highest average cost of living per capita is attained by newspaper workers, and cigar factory operatives are a close second. The employés of sewing machine factories alone of all the industries represented in this table have a cost of living in excess of earnings. Railway (road) employés make the highest average of earnings and lay by the largest surplus, but with the exception of hotel employés they work the longest hours per week and the greatest number of days per year. In total earnings, however, they are very closely approached by the operatives of glass factories, who are employed shorter hours per week and fewer days per year than any other class of workers.

The following table gives the provincial averages of dependents, time, earnings and cost of living for five of the principal trades or occupations for the three years 1884-6:

Occupations.		No. of dependents.		Time employed.		Yearly earnings.				Cost of living	
		Total.	Under 16.	Hours per week.	Days in year.	Wages from occupation.	Extra.	Wife and minor children's earnings.	Total.	Total.	Per capita.
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Blacksmith	1886	3.09	2.01	59.36	273.75	432 08	7 96	10 09	450 13	392 51	95 95
	1885	2.58	1.67	59.05	272.77	418 42	4 13	16 28	438 83	368 43	102 87
	1884	2.35	.....	58.19	269.54	428 32	2 91	6 36	437 59	376 02	112 27
Carpenter	1886	2.88	1.76	55.61	270.05	406 70	12 39	7 21	426 30	373 33	96 16
	1885	2.98	1.95	57.47	262.05	424 01	6 42	9 55	439 98	379 11	95 18
	1884	3.15	.....	57.78	256.28	409 34	3 37	14 43	427 14	376 34	90 80
Machinist	1886	3.07	2.00	59.38	278.72	463 72	11 62	13 00	488 34	410 79	100 83
	1885	2.62	1.78	58.02	264.67	452 97	4 29	9 68	466 94	383 50	105 98
	1884	2.84	.....	58.63	255.26	417 22	6 25	6 01	429 48	381 32	99 04
Moulder	1886	2.90	1.78	56.74	254.74	493 91	4 23	1 17	499 31	447 04	114 74
	1885	2.84	1.89	57.61	244.90	473 51	3 40	3 86	480 87	411 99	107 30
	1884	2.40	.....	57.61	249.54	434 92	2 34	3 95	441 21	393 27	115 55
Painter	1886	2.48	1.52	57.05	253.35	381 22	8 25	4 67	394 14	362 48	104 06
	1885	2.53	1.57	58.43	256.99	410 31	6 05	7 67	424 03	369 31	104 73
	1884	2.75	.....	58.10	252.12	399 36	12 52	5 11	416 99	367 75	98 00
Average for the five trades	1886	2.91	1.83	57.44	268.03	434 70	9 65	7 69	452 04	395 54	101 12
	1885	2.77	1.82	57.99	260.63	436 03	5 11	9 32	450 46	382 88	101 46
	1884	2.77	.....	58.04	256.10	416 89	5 01	8 32	430 22	378 76	100 40

In each of the trades there is a general increase in the number of days employed and of wages earned, as well as the cost of living, but the variations are not constant throughout. Painters worked fewer days in 1886 than in 1885, and both their earnings and cost of living were less than in either of the preceding years. Carpenters also had an unfavorable turn, for, although the hours per week were shorter and the days per year

were more in 1886, their earnings were less than in 1885 or 1884; but their cost of living was also less. The averages of the five occupations show a pretty steady uniformity throughout; but here again it is to be noted that shorter hours per day and more days per year have for adjunct a lower average of wages from occupation.

In the following table comparison is made of time, earnings and cost of living for the total number of workers making returns in 1885 and 1886, together with the number of occupations over and under the averages of the respective years:

Schedule.	Averages.		No. of occupations—			
			Over average.		Under average.	
	1886.	1885.	1886.	1885.	1886.	1885.
Hours per week	58.13	58.85	165	148	93	121
Days in year	270.41	271.28	176	160	82	109
Total earnings	398.81	388.85	146	141	112	128
Cost of living	350.36	332.50	152	143	106	126
Cost of living per capita	88.96	88.36	195		63	

Hotel employés and servants with board are not included in the occupations of this table, inasmuch as the element of board in their case hinders a fair comparison with other occupations. One feature of the comparison is the lower proportion of occupations in 1886 which are under the averages than in 1885 –the general range being about 55 per cent. in the former year and 65 per cent in the latter.

An analysed statement of the relation of earnings to cost of living for 2,684 workpeople is presented in the following table for workers with and without dependents respectively:

Earnings more than cost of living.	With dependents.						Without dependents.					
	No. of workers.	Av. No. of dependents.	Av. No. of days employed.	Av. total yearly earnings.	Av. cost of living.	Average surplus.	No. of workers.	Av. No. of days employed.	Av. total yearly earnings.	Av. cost of living.	Average surplus.	
				$ c.	$ c.	$ c.			$ c.	$ c.	$ c.	
$ 0 to $ 10	125	3.76	274.25	417 29	411 88	5 41	56	277.36	214 31	208 34	5 97	
$ 10 to $ 20	107	3.24	271.46	408 54	392 61	15 93	53	264.77	239 81	223 93	15 88	
$ 20 to $ 30	85	3.73	268.54	436 67	410 91	25 76	45	270.11	257 51	232 40	25 11	
$ 30 to $ 40	69	3.54	283.06	459 85	423 27	36 58	31	273.13	293 32	257 13	36 19	
$ 40 to $ 50	101	3.03	270.50	424 81	378 09	46 72	49	276.82	278 67	231 55	47 12	
$ 50 to $ 75	138	3.54	280.15	468 87	405 86	63 01	81	265.59	324 07	260 12	63 95	
$ 75 to $100	129	3.41	280.19	509 35	418 79	90 56	78	269.10	352 85	263 18	89 67	
$100 to $150	152	3.24	286.02	520 61	395 65	124 96	116	275.09	388 71	262 19	126 52	
$150 to $200	80	3.55	292.58	584 61	408 54	176 07	78	278.10	434 19	261 24	172 95	
$200 to $300	51	3.27	294.49	669 50	429 18	240 32	68	282.43	506 20	264 30	241 90	
$300 to $400	11	4.00	308.55	894 17	543 77	350 40	13	297.15	656 85	321 54	335 31	
Over $400	13	4.38	303.00	955 31	444 77	510 54	3	292.00	786 66	355 33	431 33	
Total	1061	3.45	279.96	490 42	407 46	82 96	671	273.92	354 00	252 13	101 87	
Earnings equal to cost of living	277	3.68	267.78	398 89	398 89		202	270.69	207 31	207 31		

An analysed statement of the relation of earnings to cost of living—(*Continued.*)

Earnings less than cost of living.	With dependents.						Without dependents.					
	No. of workers.	Av. No. of dependents.	Av. No. of days employed.	Av. total yearly earnings.	Av. cost of living.	Average surplus.	No. of workers.	Av. No. of days employed.	Av. total yearly earnings.	Av. cost of living.	Average surplus.
				$ c.	$ c.	D'ficit $ c.			$ c.	$ c.	D'ficit $ c.
$ 0 to $ 10	70	3.61	264.51	405 25	410 66	5 41	30	260.27	192 87	199 07	6 20
$ 10 to $ 20	49	4.49	250.45	393 18	408 87	15 69	6	285.83	232 58	249 33	16 75
$ 20 to $ 30	51	3.71	255.65	371 38	397 72	26 34	13	254.08	192 65	218 67	26 02
$ 30 to $ 40	29	4.76	257.48	419 35	455 29	35 94	9	198.78	155 95	193 64	37 69
$ 40 to $ 50	26	4.27	237.35	364 13	411 42	47 29	8	254.00	173 44	220 92	47 48
$ 50 to $ 75	53	3.68	254.38	379 52	441 13	61 61	12	198 50	146 56	213 33	66 77
$ 75 to $100	34	4.00	234.94	338 73	426 01	87 28	9	185 00	188 78	272 56	83 78
$100 to $150	39	4.46	231.62	347 11	469 77	122 66	2	116.00	89 75	206 00	116 25
$150 to $200	16	5.31	230.88	332 94	506 81	173 87	.....	.....	.....	.....	.....
Over $200	17	4.88	206.24	315 51	587 18	271 67	.....	.....	.....	.....	.....
Total	384	4.13	247.83	375 16	435 52	60 36	89	235.12	181 06	216 25	35 19
						Sur-plus.					Sur-plus.
Average	1722	3.64	270.84	450 00	412 34	37 66	962	269.65	307 20	239 40	67 80
Over average	705	3.38	283.51	524 40	407 94	116 46	386	275.95	422 66	268 30	154 36
Under average	1017	3.81	262.06	398 42	415 40	-16 98	576	265.43	229 81	220 03	9 78

Here it appears that, of the total number of employés with dependents, 1,061 have an average surplus of $82.96, 277 spent all their earnings on maintenance, and 384 had an average deficit of $60.36. Those having a surplus were employed on an average about 280 days during the year, the ones employed the greatest number of days naturally having the largest earnings and surplus; those whose cost of living was equal to earnings were employed an average of 267.78 days; and those whose earnings were less than cost of living were employed an average of only 247.83 days, or 20 days less than the workers who earned just enough for a living. The average cost of living to those who had a surplus, it will be observed, was $407.46, and their average number of dependents was 3.45. Calculated at the average cost of living per capita (which, as has been shown, is $88.96) the total cost for a family, including the worker himself, would be $396.87; so upon a like calculation, the cost of living for a family of the class who spent all their earnings (averaging 4.68 persons), would be $416.33; and for a family of the class showing a deficit, (averaging 5.13 persons,) the cost would be $456.36. It follows, therefore, that the cost of living for families of the first class was $10.59 more than the average on the basis of the per capita cost, while for those of the second class it was $17.44 less and for those of the third class $20.81 less than such average; consequently it does not appear that the failure to save anything out of the year's earnings in the case of workers of the second and third classes was due to the want of economy; the more reasonable view is that it was due to misfortune or necessity, and perhaps to both. It is the teaching of some economic writers that there is a prevailing tendency among workingmen to live up to the limit of their earnings; and this is offered as a reason for maintaining such an industrial condition as will enable employers to make larger profits each successive year, thereby surely adding to capital and maintaining the wages fund for employment of next year's labor. But while it is doubtless true that such a tendency prevails, it is not

established that workingmen are prone to spend beyond the limit of a reasonable necessity: it is not established that, were all the profits of industry divided among them, the whole would be spent. On the contrary, it is proven by the statistics of the 2,684 workingmen whose returns are tabulated above that while 479 saved nothing out of their earnings and 473 others spent $26,315 more than their earnings, there were 1,732 who saved an aggregate of $156,375 out of the year's earnings.

The relation of earnings to cost of living for the average of workers with and without dependents is shown in the following table:

Earnings more than cost of living.	No. of workers.	Average No. of days employed.	Average total yearly earnings.	Average cost of living.	Average surplus.
			$ c.	$ c.	$ c.
$ 0 to $ 10	181	275.21	354 49	348 91	5 58
$ 10 to $ 20	160	269.24	352 65	336 73	15 92
$ 20 to $ 30	130	269.08	374 65	349 11	25 54
$ 30 to $ 40	100	279.98	408 22	371 76	36 46
$ 40 to $ 50	150	272.56	377 07	330 22	46 85
$ 50 to $ 75	219	274.77	415 31	351 96	63 35
$ 75 to $100	207	276.01	450 38	360 16	90 22
$100 to $150	268	281.29	463 52	337 88	125 64
$150 to $200	158	285.43	513 10	336 48	175 62
$200 to $300	119	287.60	576 18	334 96	241 22
$300 to $400	24	302.38	765 62	423 40	342 22
Over $400	16	300.94	923 69	428 00	495 69
Total	1732	277.62	437 57	347 29	90 28
Earnings equal to cost of living	479	269.01	318 10	318 10	.....
Earnings less than cost of living—					Deficit.
$ 0 to $ 10	100	263.24	341 54	347 18	5 64
$ 10 to $ 20	55	254.31	375 66	391 46	15 80
$ 20 to $ 30	64	255.33	335 07	361 35	26 28
$ 30 to $ 40	38	243.58	356 96	393 32	36 36
$ 40 to $ 50	34	241.26	319 26	366 60	47 34
$ 50 to $ 75	65	244.06	336 51	399 08	62 57
$ 75 to $100	43	224.49	307 35	393 90	86 55
$100 to $150	41	225.98	334 55	456 90	122 35
$150 to $200	16	230.88	332 94	506 81	173 87
Over $200	17	206.24	315 51	587 18	271 67
Total	473	245.44	338 64	394 27	55 63
					Surplus.
Average surplus	2,684	270.41	398 81	350 36	48 45
Over average	1,079	280.49	479 44	347 64	131 80
Under average	1,605	263.64	344 60	352 18	−7 58

In this table the average time of workers who had a surplus was 277.62 days; of those whose earnings was equal to cost of living, 269 days; and of those whose earnings were less, about 245½ days. The average time of all classes for the year was 270.41 days, while that of those who saved more than the average surplus of $48.45 was 280½ days, and of those who saved less, 263.64 days. Of 1,732 who had a surplus, 724 saved less

than $50 each out of earnings; and of the 473 who had a deficit, 291 spent less than $50 in addition to their earnings.

A comparison of the relation of earnings to cost of living for the three years 1884-6 is made in the following table:

Schedule.		Relation of earnings to cost of living—								
		More than.			Equal to.			Less than.		
		With dep.	Without dep.	Total.	With dep.	Without dep.	Total.	With dep.	Without dep.	Total.
No. of workers	1886	1,061	671	1,732	277	202	479	384	89	473
	1885	950	671	1,621	410	300	710	245	61	306
	1884	794	548	1,342	884	381	1,265	181	65	246
Average per worker of—										
Dependents	1886	3.45	.....	.....	3.68	.....	.....	4.13	.....	.....
	1885	3.41	.....	.....	3.59	.....	.....	3.97	.....	.....
	1884	3.09	.....	.....	3.47	.....	.....	3.82	.....	.....
Days employed	1886	279.96	273.92	277.62	267.78	270.69	269.01	247.83	235.12	245.44
	1885	278.53	279.15	278.79	267.14	277.99	271.72	233.61	218.11	230.52
	1884	280.37	275.77	278.49	258.78	265.47	260.79	209.64	229.82	214.97
Earnings $	1886	490.42	354.00	437.57	398.89	207.31	318.10	375.16	181.06	338.64
	1885	493.21	345.03	431.87	396.59	218.87	321.50	356.12	160.67	317.16
	1884	510.95	373.32	454.75	385.86	205.39	331.51	300.25	147.79	259.96
Cost of living $	1886	407.46	252.13	347.29	398.89	207.31	318.10	435.52	216.25	394.27
	1885	400.14	231.91	330.50	396.59	218.87	321.50	412.86	191.10	368.66
	1884	398.70	251.88	338.75	385.86	205.39	331.51	374.88	191.48	326.42
Surplus or deficit (-) $	1886	82.96	101.87	90.28	.....	.....	.....	-60.36	-35.19	-55.63
	1885	93.07	113.12	101.37	.....	.....	.....	-56.74	-30.43	-51.50
	1884	112.25	121.44	116.00	.....	.....	.....	-74.63	-43.69	-66.46

A close uniformity is apparent in the comparative figures of this table, but what seems to be the most striking feature in the relation of earnings to cost of living is the bearing of surplus and deficit on the length of time employed and the number of dependents. This will most clearly appear from an examination of the following table, in which the days employed, the number of dependents and surplus or deficit are exhibited for workers having dependents—the first class being those with earnings more than cost of living, the second class those with earnings and cost of living equal, and the third class those with earnings less than cost of living:

Schedule.		1886.	1885.	1884.
Days employed	1st	279.96	278.53	280.37
	2nd	267.78	267.14	258.78
	3rd	247.83	233.61	209.64
No. of dependents	1st	3.45	3.41	3.09
	2nd	3.68	3.59	3.47
	3rd	4.13	3.97	3.82
Surplus or deficit (-)	1st	82.96	93.07	112.25
	2nd	.....	.....	.....
	3rd	-60.36	-56.74	-74.63

A final three years' comparison of the relation of earnings to cost of living is shown in the following table, in which an analysis is made of workers, dependents, days employed, earnings, cost of living and deficit, according as they are over or under the average surplus of all, and classified under the heads of workers with and without dependents :

Schedule.		With dependents.			Without dependents.			Total workers.		
		Average.	Over average.	Under average.	Average.	Over average.	Under average.	Average.	Over average.	Under average.
No. of workers	1886	1,722	705	1,017	962	386	576	2,684	1,079	1,605
	1885	1,605	652	953	1,032	391	641	2,637	976	1,661
	1884	1,859	610	1,249	994	352	642	2,853	1,005	1,848
Average per worker of—										
Dependents	1886	3.64	3.38	3.81	.....	.....	.....	.....	.....	.....
	1885	3.54	3.34	3.68	.....	.....	.....	.....	.....	.....
	1884	3.34	3.06	3.48	.....	.....	.....	.....	.....	.....
Days employed	1886	270.84	283.51	262.06	269.65	275.95	265.43	270.41	280.49	263.64
	1885	268.76	283.08	258.97	275.21	284.81	269.35	271.28	282.91	264.45
	1884	263.22	284.69	252.73	268.81	282.19	261.49	265.17	283.35	255.28
Earnings $	1886	450.00	524.40	398.42	307.20	422.66	229.81	398.81	479.44	344.60
	1885	447.60	529.35	391.68	297.46	424 87	219.74	388.85	484.00	332.93
	1884	430.95	536.28	378.30	294.20	433.68	217.73	383.31	489.28	325.68
Cost of living $	1886	412.34	407.94	415.40	239.40	268.30	220.03	350.36	347.64	352.18
	1885	401.17	403.69	399.45	225.71	254.40	208.20	332.50	334.77	331.17
	1884	390.28	400.07	385.49	230.11	263.96	211.55	334.47	342.72	329.99
Surplus or deficit (–) $	1886	37.66	116.46	-16.98	67.80	154.36	9.78	48.45	131.80	-7.58
	1885	46.43	125.66	-7.77	71.75	170.47	11.54	56.35	149.23	1.76
	1884	40.67	136.21	-7.19	64.09	169.72	6.18	48.84	146.56	-4.31

Thus it appears that of the total workers with dependents making returns in 1886, the surplus of 705 exceeded the general average of $37.66, their average being $116.46 ; whereas the 1,017 under the general average fall below the cost of living by $16.98. So, also, respecting the days employed : those exceeding the general surplus worked 283.51 days in 1886, 283.08 in 1885 and 284.69 in 1884 : while those below it worked only 262.06 days in 1886, 258.97 in 1885 and 252.73 in 1884. It is the minority throughout who work the greatest average time, earn the highest average wages and manage to lay by the chief portion of the aggregate savings.

Relations of Wage-Earners to Employers and Employment.—With the object of getting as full and correct a knowledge as possible of the relations of employés to employers, their work, modes of payment, hours of labour, health and safety during working hours, the state of organized labour, the result of co-operative experiments, the taste for mental improvement, and kindred matters, the questions given below were placed in the hands of the collectors of statistics for the Bureau in the various centres of industry selected. Questions 1, 3, 4, 5 and 6 were also sent to the manufacturers throughout the Province, and from all these sources a great deal of information has been received along the line of the queries, a summary of which follows :

1. Payment of Wages.—(1.) Is there a fixed pay-day for wages of workers? and what day? (2.) How many pay-days in each month? (3.) Is the full amount of workers' wages paid each pay-day? (4.) What proportion, if any, is reserved by the employer? and for what object is it reserved? (5.) Are wages as a rule paid in cash?

2. Accidents to Workers.—(1.) Are any accidents reported for the year? (2.) How many? and what has been the nature of each? (3.) How many have resulted fatally? how many have resulted in permanent injury? and to what cause were they due in each case? (4.) Is machinery so protected as to prevent accidents, with reasonable care on the part of the workers?

3. Health and Safety of Workers.—(1.) What is the general condition of the health of workers? and how in this respect do in-door and out-door workers compare? (2.) Has any epidemic or contagious disease broken out in the families of workers? and if so, what kind of disease, what were its consequences, and to what is its origin ascribed? (3.) Is there a proper ventilation of workshops or factories? (4.) Are wash-rooms and water-closets provided for the convenience of workers? and separate ones for each sex? Are they kept in a proper state of cleanliness? (5.) Is the water supply ample and of a good quality for drinking? (6.) Are adequate means of escape provided in case of an outbreak of fire? (7.) Are the doors of factories or shops locked or bolted during working hours?

4. Running Time of Shops and Factories.—(1.) Have factories or shops been idle for any part of the year? and if so, how long and for what cause? (2.) Have workers been idle for any cause except the closing of factories or shops, or (in the case of out-door trades) the state of the weather? Have they been able, as a rule, to find steady employment? (3.) Is it the custom to keep factories, shops, etc., open the same number of hours for each day of the week? If any portion of Saturday is given to workers, how much? and are the full day's wages allowed?

5. Short Hours of Labor.—(1.) In what trades (if any) have the hours of daily or weekly labor been shortened during the year? and to what extent have they been shortened per day or week? (2.) What have been the results to workmen—(*a*) as to reducing the number of persons out of employment; (*b*) as to increasing the number of days employed during the year; (*c*) as to conduct and character? (3.) State whether it is regarded as an advantage to the working classes to shorten the hours of daily labour and increase the number of days employed in the year, and the respects in which it is advantageous, or otherwise. Does it tend to insure a livelihood for the family throughout the year and to promote economy of living, or does it in any degree tend to idle and dissipating habits? (4.) In what way do workers improve the opportunity afforded by the shorter hours of daily labour?

6. Industrial Strikes or Lock-outs.—(1.) Have any strikes or lock-outs occurred during the year? and if so, what trades have been affected by them? (2.) What was the cause in each case? and if settled, upon what terms and through what agency—arbitration, conciliation, or otherwise? (3.) How many workers were affected in each case? how long were they out of employment? and what amount of earnings was lost in consequeuce?

7. Organized Labor.—(1.) Is labor organized in your town? if so, how many organizations are there, how many members are enrolled in each, and what trades or occupations do they represent? (2.) Is female labor organized as well as male, and are there separate organizations? Give details as to number, membership and occupation? (3.) What has been the effect (if any) of organization on the rate of wages? (4.) What part (if any) has organized labor taken in strikes or lock-outs? (5.) How much has been expended by each organization on strikes and lock-outs—(*a*) In your own town; (*b*) In all other places? (6). How much has been expended for benevolent purposes?

8. The Co-operative Principle.—(1.) Has the principle of Co-operation been adopted in your town in any business or industry? if so, in what lines or branches, and with what results? (2.) As regards Production: is it considered to give to those employed a more equitable return for their labor, and a greater share of the profits earned? State the facts upon which your opinions or conclusions are based. (3.) As regards Distribution: is it considered to be satisfactory from a business point of view? (4.) How many co-operative houses exist in your town? Give their history—when started, growth of business and capital, present standing, etc.

9. Reading-Rooms and Libraries.—(1.) How many reading-rooms or libraries in your town? (2.) How long have they been established and how are they maintained? (3.) During what hours are they open, and to what extent are they patronized by the working classes?

1. Payment of Wages.—There is but little change to note since last report in the methods of the payment of wage-earners. Our correspondents unite in recording the fact of fixed pay days, weekly, semi-monthly or monthly, the frequency or otherwise of payment being regulated to a great extent by the size of the concerns and the length of the pay list. The size of the establishments also appears to affect the matter of paying employés in full up to pay day, those having a weekly day generally paying wages up to date, or to the end of the day previous to payment, while in most of the larger establishments paying fortnightly or monthly from three to fifteen days' wages are kept back, and in one or two instances a month's earnings. This custom is maintained by those who practice it on two grounds: first, that it allows a better auditing of accounts and a less hurried preparation of the pay lists; and, secondly, that it ensures a fair notice from any workman who intends to quit their employ. It is also stated that certain kinds of piecework cannot be measured and recorded in the books without allowing several days' work to go on to next pay day. A number of wage-earners agree with this presentation of the case, although many others aver that some of the big corporations employing hundreds of hands keep the pay back for several weeks in order to get the benefit of the interest on the money due their men. It is encouraging to find that nearly all employers are reported as paying wages in cash. Here and there some dull concerns adhere to the

moribund custom of paying in store orders, but the percentage is very small, and the number of hands employed by these establishments is correspondingly insignificent. The replies under this heading can be fairly summarized in the statement that regular pay days prevail, and, with very few exceptions, cash is the rule.

St. Catharines collector: Most of the contractors pay every week now, since their men are members of the Knights of Labor. They began last January. Up to that time they paid once a month, and kept back two weeks' pay. They also paid in orders, and when the men went to get them cashed they had to lose from 10 to 25 per cent. to get cash, or else trade it out for goods or whiskey.

London employer (brewer): A portion of the wages is reserved from maltmen only—50c. a week until the close of the malting season. It is done in order to keep them from leaving without due notice.

Toronto employer (foundry): Wages are retained for the purpose of facilitating the paymaster's work, and also to cover work which may be bad in case the employé should leave.

Walkerville employer (distiller): All employés receive the full amount of wages coming to them, except twenty-eight feeders, from each of whose pay 50c. is reserved each week they work. The cause of this is that each barn of cattle becomes accustomed to the presence of one man, and he is allowed to do his work unnoticed. Therefore, in hiring cattle feeders, it is distinctly understood they shall serve the full time or else forfeit the amount which may have accumulated as above at the time of leaving; otherwise, they receive the full reservation at the end of the specified time.

2. Accidents to Workers.—A number of accidents have been reported during the year, but they have been mainly of a minor sort, and were chiefly met with in planing mills, or in other places where saws and knives are driven by machinery. The greater part of these accidents, however, are said to have been the result of carelessness on the part of the operatives, who too often are raw and very young lads from the school or country, who have little or no knowledge of mechanics, and who are set to work upon some of the more dangerous machines. The accidents occurring indoors have generally resulted in the loss of a finger or two, or an eye, or perhaps a hand or arm has had to be amputated; but with these exceptions, and loss of time from burns and bruises from various causes incident to mechanical work, no very serious accidents have occurred among operatives. Two or three fatal accidents have been reported from falling down hoists and elevators, and opinions are divided as to where the blames lies. Six fatalities are recorded by the St. Thomas correspondent, sustained by falling off trains, and he also reports several painful accidents among railway men, resulting in permanent injury. Happily other railway centres have not so sad a record, and while limbs have been injured in coupling cars, etc., no lives have been lost on the track. On the question of the amount of protection given machinery, opinions differ. The general trend of testimony is that on the whole machinery is fairly well protected, and that the accidents occurring from time to time are as often the fault of the workman as of the employer, while a few correspondents are quite outspoken in denouncing the carelessness of certain establishments, so far as giving adequate protection to belting, knives, etc., are concerned. Cases of almost criminal negligence are mentioned, and show the need of the appointment of a fit Government officer to inspect the factories, a visit from whom will be calculated to remedy the evils complained of by some correspondents in important manufacturing centres.

Woodstock collector: Some firms are in the habit of putting green hands from the country on machines they know nothing about; and, what is worse, some shops are fairly swarming with young boys, and they are often set to work machines that only men of experience should run.

Hamilton collector: In most cases of accident the firms are to blame, according to the statement of the employés; but it is evident to me that a little more care on the part of the workers would be the means of saving much pain and loss of time. Another reasonable opinion given as to the cause of many minor accidents, is the employment of young lads to manipulate the large and powerful, and, I may add, dangerous machinery employed in certain works here.

Hespeler collector: Machinery in many instances is not as well protected as it should be, especially belting. Indeed, it is a wonder there are not more accidents, and this can only be attributed to the extraordinary care taken by the employés themselves whilst employed, rather than to the care displayed by the employers to protect the belts running in factories.

3. Health and Safety of Workers.—The reports as to the condition of the health of the working classes are rather favorable, although the Merritton correspondent speaks of the ill effects of mill life upon both men and women. Although there has not been anything like an epidemic of fevers or other contagious diseases, cases of typhoid,

diphtheria, scarlet fever, chicken-pox, etc., are reported in the families of workmen in several places, yet none profess to trace the origin of these complaints to factory or shop causes, if we except a Toronto correspondent, who claims that the bad ventilation and the debilating influence of poor food and eating under unhealthy conditions have superinduced such attacks. As an offset to this, the Peterboro' correspondent states that the few cases of diphtheria occurring in that town were "confined chiefly to the upper class." In the north-eastern part of London the families of workingmen suffered considerably from diphtheria and typhoid fever, alleged to be generated by the sewerage emptying into Carling's creek. A consensus of opinion of correspondents is decidedly in favor of out-door as against in-door employment as regards healthfulness. Employers report in every case good or fair ventilation, but our other correspondents are divided on that question. The greatest sufferers from poor ventilation appear to be women and girls employed in the cities in shirt factories, tailor shops, and such places. They are often crowded into small rooms, to which our Hamilton correspondent gives the suggestive appellation of "sweat shops." Very little improvement has been made in the way of providing separate wash-rooms and water-closets for the sexes. Common decency has impelled some of the employers to provide different water-closets for male and female, but in a large number of instances no distinction is made between the two. The supply of water is generally reported as satisfactory, and several places boast: "We have the best water in Ontario." Protests are made by some correspondents against the lack of fire escape, especially in Hespeler and Galt. The Almonte correspondent, however, reports "good fire escape," and a number of factories in other places are credited with an endeavor to meet the necessities of the case. That there is a pressing call for inspection and reform in the matter of fire escape, however, is very apparent from the general tone of the reports. With a few unimportant exceptions in Toronto, the only concern reported as locking its doors during work hours is the screw factory in Dundas, where the "doors are locked shortly after 7 a.m., and not opened until shortly before 12." The correspondent does not give the reason.

Merritton collector: There is more consumption among the workers of Merritton than in any other place in this part of the country. Children go to work in the mills so young, have so little out-door exercise, and inhale so much dust, that it weakens them, and you find more old men and women here at thirty than in most places at fifty.

4. Running Time of Shops and Factories.—Several factories have been closed during the year for periods ranging from two to ten weeks, in most instances, it is claimed, for stock-taking or repairs, or on account of lack of water supply, accidents to dams, etc. A few establishments are reported as working short hours for lack of work, while in Peterboro' and Woodstock steady work and full hours, with occasional overwork, prevailed. With the exception of these two towns, however, it cannot be said that there was anything like a "rush of work" during the year. In many places the custom is to end the week's work at 5 o'clock on Saturday, but while most employers allow the full week's wages, others "dock" the men for the hour. In several factories the arrangement is to work eleven hours a day except Saturday, when work stops at noon. Other establishments run ten hours a day, except Saturday, when they close at three or four o'clock; but the general rule is that in such a case the employé must suffer the loss. Men working for the railways have had steady employment and full hours.

Stratford collector: The G. T. R. shop has for its day's work in winter nine hours, and as soon as the day is sufficiently long for them to see to work ten hours they do so, and quit at eleven on Saturday.

Haggert Bros. Manufacturing Co., Brampton: Our shops have been idle from the 15th of December to the 1st of March, about sixty working days, caused by the death of the president and some changes in the management. Workmen have not been idle from any other cause.

London employer (brewer): Our malt houses are idle from necessity for about three or four months during the hot weather. During the past two years they have been idle about eight months, the difference (about two months) being partly due to the action of the Scott Act in reducing the demand, and partly to the action of the United States Government increasing the duty on Canadian malt, so that we could not export.

5. Short Hours of Labor.—During the year important changes in the hours of labor have been effected in a number of cities, and the results, as near as could be judged from

the short time following the inception of shorter hours, may be said to be favorable. In Toronto the nine hour movement made great strides, taking in all the building classes and several of the leading in-door occupations. Some workmen now enjoy a half-holiday on Saturday, in addition to the hour given them on other days, thus making the week's time fifty hours. In London the outside callings work only nine hours a day, in St. Catharines they get off two hours earlier than formerly on Saturday, and in St. Thomas the same change has been effected. Reports from employers of labor on the question of shorter hours for their hands have brought out a medley of opinion. While a few write as favorable to nine, or even eight hours a day, the majority declare themselves in favor of ten hours a day. Some of the reasons adduced are strangely original and philosophical, while others are given with all the directness and force of a trained, practical, business mind. A score or more write: "Shorter hours would tend to idle habits and dissipation." The views of both parties are set forth in the extracts which follow.

Aurora employers (plough makers): It is considered by us better to shorten the hours of daily labor and increase the number of days in which men are employed. We endeavor to keep our men employed all the year around.

Belleville employer (coal gas manufacturer): In my opinion ten hours a day will be better all around. The more spare time men have the more they are likely to form intemperate habits.

Brantford employer (cigar maker): I cannot see any benefit in shorter hours to males, but it gives females a better chance to improve their condition. It is a disadvantage to the employer at a busy season, as more workers crowd small places and make them more unhealthy.

Hamilton employer (lamp manufacturer and plumber): It is no advantage to shorten the hours of daily labor. The industrious man having a family wants to work full time, being paid by the hour. Others would tend to idleness, and a few to dissipation.

Hamilton employer (baker): The working bakers shortened time by two hours a day. This soon reduced the number of unemployed bakers, and made workmen better satisfied. I have not seen any increase of dissipated habits.

Hamilton employer (manufacturer of electric lamps): It is the opinion of this firm that eight hours should be a day's work, and if the movement were general we should join it, giving a full day's pay for eight hours. Our men appreciate and no doubt enjoy their half holiday.

Huntsville employers (lumbermen): The more hours men work the better they seem to do. They have less time to spend in dissipation, consequently they save more money, and their families live better. Long hours and low wages love the working classes, short hours and high wages are their curse.

Owen Sound employer (iron founder): Shortened hours of labor, we believe, in 75 per cent. of cases would only tend to mischief. The great majority of workmen make no serious effort to better their condition. They live in an easy, indifferent manner, with little provision for the future. Stimulants and narcotics used by one generation after another destroy their ambition.

St. Catharines employer (carriage maker): We are sure that the old system of ten hours a day and six days a week is the best for both employer and employed. The time is not exhausting, and sufficiently liberal to the employés as mechanics, and any contraction of hours will and does only lead to unfavorable results in many respects, which the space here is not sufficient to fully present. Where hands do not want to work the full time they do not want to support a family.

St. Mary's employer (produce dealer): No advantage for the laboring classes in my employment to shorten the hours, for the balance is generally spent in idleness, gossiping, and so on. But drunkenness or dissipation I do not tolerate or allow.

Toronto employer (chemical and drug mills): We do not think ten hours too long, and fear that our work people are not so well off financially since fifty-six hours per week has been adopted.

Toronto employer (hat maker): We think the shorter hours an advantage to the men, and have found no evil effects resulting therefrom.

Toronto employer (marble and stone cutting): I have noticed during the past summer that most of the men went in for enjoyment on Saturday, and spent most of their money.

Toronto employers (engine and boiler makers): It would be an advantage to shorten working hours to eight or nine hours per day, but that would have to be done and enforced by law, so that one manufacturer would have no advantage over another by his men working longer hours at the same pay per day.

Toronto employer (corset maker): We find it desirable to reduce hours of labor when necessary, instead of reducing the number of employés. We believe this has a good moral effect upon operatives.

Toronto employer (watch case manufacturer): In our opinion ten hours a day is a fair, honest day's work, and shorter hours mean enhanced cost of living, and in the end less work for those who are now crying out about having too little. Shorter hours, in our opinion, would simply mean in most cases more time to loaf and spend money in dissipation, and in very few cases would it be employed for mental improvement.

Toronto employer (shirt maker, etc.): We have always worked nine hours, but for a short time during the summer ran till nine p.m. We do not do so now, as we found it interfered with the work of the following day, and as a result the output was no larger.

Toronto employer (trunk and box manufacturer): While so many men are unemployed it is an advantage to them to shorten hours to a limit that would make the cost of the manufactured article so great that importation would begin, which might again be met by an increase in protective duties. But all this would tend to make living dearer, which would again have to be met by higher wages. Short hours must become general in each trade throughout the country or one section would suffer to the gain of the other. Short hours improve the condition of the sober and the industrious, while it gives the intemperate and shiftless mechanic only more time for idleness and dissipation. On the whole we favor shorter hours.

Port Hope employer (foundry and machine shops): When trade is dull I prefer shortening the hours to discharging the men. My experience is that the majority of workmen calculate to spend all their earnings, whether little or much. I cannot perceive that hardly any of them have very much saved at the end of the year, whether the wages be $1.00 or $2.00 a day.

St. Catharines employer (contractor): Men working by the hour rarely stop to take any portion of Saturday.

St. Catharines employer (cigar maker): Piece-work hands quit work at four on Saturdays.

Hamilton workman: In the bricklayers' and masons' trade the shortening of the hours of labor for the past year (which was an experiment) is regarded as a decided advantage to the members of the trade, and many of those engaged in other occupations have expressed their decided approval of a reduction of the hours of labor, believing that it tends to create more steady employment, and reduces the number of unemployed men and women, thereby creating a better feeling of security in the minds of the toilers of a livelihood for their families. It does not encourage idle or dissipated habits, as it is generally understood that these habits are mostly acquired when men are out of work, despondent and discouraged.

London workman: The men at the G.T.R. (formerly G.W.) car works have worked the nine hour system for the last fifteen years, and their superintendent, Mr. McIlwain, has said that he never knew a more orderly or sober lot of men when the number is taken into account, and he has had a wide experience in various parts of the United States. These men, during the severe depression of the past four or five years, have been offered the alternative of submitting to a reduction of the number of employés or the number of hours, and they decided to have the hours reduced, until one season they worked only forty hours a week. This shows how they view short hours, and the effect of that system upon wages after a ten or fifteen years' experience. If a reduction in the number had been decided upon the discharged ones might, by force of circumstances, have been compelled to offer to work for less, and thus reduce wages without reducing time.

Stratford workman: Shorter hours are spoken of as being quite an advantage to the men, as giving them an opportunity of doing gardening and other necessary work around their homes.

St. Catharines workman: The reduction of the hours of labour by one each day has furnished work on the public works for at least one hundred more men, and their conduct is better than before. It furnishes work for more, and gives more time for reading and enjoying home. Some of the men are subscribing for papers now that never thought of taking them before, and some are going to night school,

Toronto workman: Shorter hours are considered a most decided advantage. In fact, by thinking men the reduction of the hours of labor offers the most immediate means of improving the condition of the laboring masses, by providing leisure for the overworked, and work for those who, without it, must either become paupers or criminals, or both. While it may reduce the earnings of a particular week, the results show that the year's earnings are as much, if not more. Those who have been favored with shorter hours in this city during the past year or two fill up the spare hours generally by recreation of a healthful character, and improving their homes, and conduct themselves as would citizens of any other class. The fact of the head of the house having more time at home must as a rule result in benefit. The allegations as regards dissipation are entirely unfounded, the opposite being the fact.

6. Industrial Strikes or Lock-Outs.—Although several strikes occurred during the year, only three or four were of a serious nature, and on the whole the relations between employers and employed may be regarded as quite friendly. Chatham appears to have had all the excitement of a strike and lock-out, action and re-action combined, and several strikes of a minor sort occurred in addition to a "double action" one described below by our collector. In Kingston about a dozen blacksmiths went out on strike for a day, which was settled by partly meeting the demand. No serious strike is reported from Hamilton, but a lock-out occurred in the establishment of George Tuckett & Sons' tobacco factory. About 150 employés, male and female, were involved in the difficulty, and were out two weeks, losing about $3,000 in wages. The affair was settled through a committee of the men. Early in the year a strike occurred in the Oshawa malleable works, the reason assigned being an attempt on the part of the firm to make the shop non-union by increasing the number of apprentices. The strike affected 66 moulders, who were out of employment from the 30th of January to the 16th of March. The position taken by the men was finally acknowledged by the firm. Loss in wages, about

$5,200. The men claim that an increase of work in summer almost made up for the loss of time and wages during the strike. Strikes involving no serious loss of time or money were reported from Peterboro', Merritton, St. Catharines, Tilsonburg and Woodstock. In Toronto strikes were indulged in to a trifling extent in a number of trades, including piano varnishers and polishers, lathers, brush-makers, plumbers and steam-fitters, all of which were quickly and satisfactorily settled. Two strikes of a rather serious character were reported, however. About 280 men at the Massey works were on strike for about a week, when all returned to work on a satisfactory basis arrived at by arbitration. The other strike, that on the street railway, will be memorable on account of its effect upon passenger traffic, and the fears entertained at times of rioting and bloodshed. Fortunately the crowds witnessing the scenes attending this great strike did so in safety. The employés of the company were forbidden to join the Knights of Labor, or any labor association, and some 275 conductors and drivers struck. The company supplied their places with new men, many of whom were brought into the city from outside points, and the strikers were defeated.

Chatham collector: A committee of Knights of Labor waited upon the proprietors of mills and factories asking them to agree to close at 5 p.m. on Saturday without reduction of pay. Some difficulty arose with Taylor & Co's firm, woollen and flour mill. Mr. Taylor says he agreed to close if all the others would do the same. The Knights of Labor claim, however, that he refused entirely. The demand was made not by any of Mr. Taylor's employés, but by a committee of the Knights of Labor. The result was that the Knights boycotted Mr. Taylor's flour. After this was done seven large manufacturing firms dismissed all K. of L. men employed in their business until the boycott was removed from Mr. Taylor. Some of them closed down, but several factories refused to join in the "lock-out." This "lock-out" lasted one week, and was settled by a committee of the K. of L. and one from the manufacturers meeting and agreeing to the closing of the factories at 5.30. The trades affected by the affair were: Carriage works, a fanning mill factory, a foundry, a planing mill, a saw mill, a furniture factory and Taylor's establishment.

Hamilton employer (engine works): The painters struck because two non-union men were employed. Their places were at once filled.

Merritton (cotton mills): Trifling strikes occurred through Knights of Labor, but at present matters are running amicably. From three hours to one day were lost.

Toronto employer (plumber and steam fitter): A strike took place in June. The plumbers demanded an increase of pay and shorter hours. It was settled by mutual agreement, when the plumbers were out about ten days' at a loss to one man of about $90. The steam fitters got an advance without striking.

Woodstock employer (agricultural implements): We had one strike. The men objected to the employment of so-called unskilled labor. The matter was settled by employing others to fill the vacancies. About 15 men were affected by the strike. The strikers were not reengaged, and some of them are out of employment yet.

7. Organized Labor.—Out of eighteen industrial centres reporting, only two—Kingston and Almonte—appear to be without a representation of organized labor. In nearly all the others the Knights of Labor are to be found, and unions devoted to distinct trades or occupations also exist. Belleville has an assembly of K. of L. and three separate labor unions. A female assembly started in that town is said to have collapsed. Chatham has an assembly of Knights, of which about 60 members are females, representing tailoresses, dressmakers, woollen factory girls, general servants and laundry girls. A sum of $200 was paid towards assisting strikes elsewhere, and about $100 in charity at home. Dundas has one labor organization, including male and female members. No money was paid out in strikes or lockouts, but a considerable amount was bestowed on benevolent purposes. Gananoque has between 200 and 300 who belong to labor organizations. The K. of L. have recently been established in Galt, and the labor societies are forming. Hamilton has seventeen unions, and female labor is, to a certain extent, organized. There is a benefit fund in connection with all the unions. The K. of L. are about 100 strong in Hespeler, and all trades are represented. Several of the members are females. Some funds were applied to charities. Besides the K. of L., who number about 1,200, there are nine trades' unions, with a membership of nearly 400, in London. About ninety females belong to the first named institution. Oshawa has three labor organizations. The iron moulders number about 100, and they paid $135 in charities during the year. The K. of L. number about 250, and applied $150 to benevolent purposes. The third labor organization is the Agricultural Implement L. A. Peterboro' has an assembly of K. of L. with a small membership (about eighty), an iron moulders'

union and a shoemakers' union. No female labor organization exists. Stratford has an assembly of the K. of L. numbering about 500. St. Catharines has several labor organizations, the membership of which totals fully 1,000; Merritton has about half as many more. St. Thomas has about 1,500 belonging to labor organizations, chiefly in the K. of L. One assembly, the "Grace Darling," is for females only, and has a membership of eighty. Other assemblies have a mixed membership. Forty-three assemblies of K. of L. are reported in Toronto, besides sixteen trades' unions. There are two labor organizations composed entirely of females. About 10,000 to 12,000 persons are supposed to belong to labor societies in the city. Besides assisting the strikers on the street railway, help was also given the Oshawa strikers. A considerable sum of money was also paid in aiding the sick and in death levies. Woodstock has two assemblies of K. of L., with a membership of about 500, of whom about a dozen are women, chiefly dressmakers. Needy members of the order have been assisted from the funds. As it is against the rules of the K. of L. to give information to outsiders about the doings of the order, it has almost been impossible to get precise information as to the amounts of money given in charities or in assisting strikers in outside towns or cities. The majority of our collectors state that the tendency of organized labor has been to raise wages and lessen the hours of labor.

8. The Co-operative Principle.—This branch of economics has not been tested to any great extent, as only about half a dozen instances, present and past, are cited by collectors of statistics; yet, as far as tried, the experiments have not on the whole been successful. One establishment alone is openly declared to be a paying concern, while several have been disastrous failures. We append the statements of correspondents regarding this interesting department of commercial experience.

Chatham collector: Several members of the Knights of Labor formed a joint-stock company and started a biscut and confectionery factory. They bought a building formerly used as a malt house. It was run only about a month, when it was shut down. The amount of money put into it was quite limited, and the factory was undoubtedly a failure.

Hamilton collector: Distributive co-operation was attempted two years ago in this city, which proved a failure. After many attempts to force its existence it had to succumb for lack of support, principally owing to the cash system, and through the general unfitness of the manager. There are no co-operative associations at present existing in this city. The experience of the past has proved that until the proper education of the workers generally on the question of co-operation in the various forms are thoroughly understood, and that confidence necessary to the successful carrying out of its principles is created, any attempt to again establish either productive or distributive co-operation would (in the opinion of many) prove another failure.

Galt collector: A store was started about three years ago, and got along very well for some time. Then some members began to get dissatisfied with the management, and took away their custom, and it was thought best to sell out, which was accordingly done last fall.

Toronto collector: The co-operative principle has been adopted in this city both in the distributive and productive branches. Distributive—by retailing various classes of goods to the members, and dividing the profits derived therefrom each six months. Productive—by paying highest rates of wages, working the regular hours of the trade, and returning to the employés a portion of the profits. The average returns of profits upon this enterprise have been 7 per cent. on purchases, and 8 per cent. on invested capital. As regards distribution, it is considered successful from the business point of view. There are two co-operative institutions carried on in this city. The Central Co-operative Society, carrying on business at 369 Yonge street, was started with twelve members in 1880, with a capital of $105; sales, $4,607.44. The membership now is 348, with a capital of $8,000, doing a business of about $35,000 per annum. The other is the Co-operative Printing Society, carrying on business at the Yonge Street Arcade, which started business about May, 1886. We are not in a position to give facts regarding this society, but believe they are doing a good business.

Woodstock collector: An earnest and honest effort has been made in this town during the past year in the direction of co-operation. A match factory on the co-operative principle was started last April by the organized workingmen of Woodstock, and shares in the enterprise have been sold to members of the Knights of Labor in different sections of the province. Viewing it in the light of a year's experience, it must be confessed that it has not been a success. Not that the principle is wrong, but the working classes are not educated in the matter, and lack that confidence in each other which above all things is necessary to make a co-operative enterprise succeed. As regards the query concerning Production, I must certainly say "Yes." It is the very life of co-operation that "the workers, or rather the producers, shall reap the profits from the product of their labor." It means the abolishing altogether of the wage system, substituting therefor the co-operative principle, which means, if anything, "equal division of profits" on the capital invested, labor being considered as so much capital. As regards Distribution, it is not satisfactory on account of defects in the law. Under the law of Ontario a Co-operative Company can get no credit, as

they cannot be sued. This, it will be readily seen, places them at a great disadvantage under the present commercial system. The match factory is the only co-operative enterprise that has been started here.

Wm. Davies & Co., pork packers, Toronto: Two years ago we commenced to distribute among those who had been with the firm twelve months and upwards a proportion of the profits, *pro rata*, according to the amount of wages earned.

9. Reading Rooms and Libraries.—The information sent in by collectors under this heading is not of a satisfactory character. No new libraries or reading rooms established by or for workingmen are reported, and from many points there appears to be considerable apathy manifested toward mental improvement. Mechanics' Institutes are pretty general, but the fee of $2 in most cases acts as a barrier to men who labor for their bread. The Y. M. C. A. reading rooms in such places as Hamilton, Peterboro' London and Kingston prove attractive to workingmen. In Peterboro' the reading room and library in connection with the Roman Catholic separate school is reported as well patronized by the working classes. Toronto enjoys the free library and reading room plan, and the three buildings (the central and two branches) being each situated in the centre of a large population, are largely patronized, especially by the working classes. The railway corporations prove the best friends to their employés, so far as providing mental pabulum is concerned.

Belleville collector: We have four reading rooms or libraries here. The Mechanics' Institute, one for G. T. R. employés, and each of the political parties has one.

Chatham collector: The president of the Mechanics' Institute here is a blacksmith, and the vice-president a carpenter. More workingmen and mechanics have of late patronized the Institute than previously.

Kingston collector: In addition to the Mechanics' Institute and the Y. M. C. A. reading rooms, we have a good library here in connection with the Kingston and Pembroke railway, supported largely by the company by annual grants, and citizens can become members for $1 a year.

Stratford collector: The only reading room is at the work shops of the G. T. R., founded by the company. It is a neat brick building, divided into a lecture room, reading room and library. The library is well selected by a committee of the employés, and contains about 600 volumes. New books are added from time to time as funds accumulate from the monthly subscriptions of the members. The reading room is well supplied with the best current literature of the day, scientific magazines, ten daily and a large number of the leading weekly papers. It is kept open from 7 o'clock, a. m. till 9 o'clock p. m., and is patronized by a great number of the employés.

St. Thomas collector: We have a reading room and a library. The reading room was established in 1882, and is maintained by membership. The hours are from 8 a. m. to 10 p. m., and the attendance averages 100 per diem. We have had a free library for three years, but the working classes do not patronize it very well.

General Labor Notes.—From the remarks and suggestions offered by our collectors on subjects not specially named in the schedule sent them, we extract the following:

Almonte.—Outside labor of all kinds was in healthy activity from the opening of the spring; but in the winter this class of workers are not so steadily employed, although in a great majority of cases they can find some sort of employment.

Chatham.—In December, 1886, the "United Business Men's Association" was organized, and is now about to be incorporated. At present it has from 25 to 40 members, and comprises some of the most prominent business men. Any man who is an employer can join, but no man who is a Knight of Labor or member of a trades' union can become a member of the Association. Object: Protection of employers' rights, and preventing undue encroachments or demands of labor organizations.

Gananoque.—Several factories put in steam power in order to lose no time in summer on account of low water. The majority of men report the past year as being, in some respects, better than the previous one. O. V. Goulette's wood-turning establishment was destroyed by fire in September, but is being carried on in rented premises. The Carriage Co. have extended their buildings to double the size they were last year, and expect to build 4,000 buggies this year.

Hamilton.—Factories and workshops have been fairly busy, and no shut down has been reported other than that required for repairs and the customary stock-taking. The prevailing feeling here is that a general Saturday half-holiday should be had by all workers.

Hespeler.—I respectfully suggest the following for future enquiry: 1. Are there any children employed in factories under the age required by the Ontario Factory Act? If so, how many, and the nature of occupation? 2. Is the vice of intemperance prevalent in your town? To what extent does this lead to the necessity of the employment of children, contrary to law, in the factories or work-shops? I find children employed in the factories who should be at school, and who would be but for the habits of their parents, especially the father

DUNDAS.—A complaint is made here that glowing promises are held out to French Canadians to remove to this place and work in the cotton mills, and that these operatives are sadly disappointed after their arrival; in fact, in some instances, they are merely a burden upon the town.

STRATFORD.—I find no perceptible difference in the rate of wages from last year. The building trade has been active during the year, with, however, no demand for imported labor; and I think all have been fairly employed during the year. A number of wage-earners with whom I have talked are not slow in expressing their opinion that for the good and welfare of the laboring classes all assisted immigration should be stopped, as far as mechanics and laborers are concerned, as there seems to be a supply of labor equal to the demand.

ST. THOMAS.—Railway men complain of the great loss of life and bodily injury on account of defective couplings and dangerous running boards on freight trains, different heights of cars, the mode of despatching trains, the color of order boards, and the great need of arbitrators to settle differences between employers and employés.

WOODSTOCK.—I think it would be a good thing to get the ages of employés, for the purpose more particularly of getting the ages of boys and girls that are found working in factories, as I know there are many very young.

LONDON.—The law should be more strictly enforced regarding proper gates or guards to hoists, guarding machinery such as shapers, sending children to school, and the prevention of lads frequenting pool rooms, etc.; it is in such places as last named that the foundation of poverty is often laid. There should be separate rooms for males and females in cigar factories and other workshops.

TORONTO.—One matter of special importance to the working people is the continued employment of minors of both sexes in large numbers by employers of cheap labor, in defiance of the Factory Act and the Public Schools Act of Ontario. This should be remedied by the active enforcement of the laws in such cases made. It is of special interest, also, to the working classes that work heretofore done by contract should be undertaken by the Government of the Province, or by the municipality, direct, and the profits of the contractor either saved to the people or given to those who do the work. A Homestead Fund should be created by the Government, from which laborers and others desiring to go on the land could be assisted, the Government providing against loss in the improvements effected.

The foreman of a large establishment in Toronto, employing both males and females, writes: It is the duty of every one who has suffered from the long hours of the workshops to express an opinion upon the evils which exist in our Province. The special study of the medical faculty and sanitary reformers of to-day is, "What are the best means to prolong life?" and it also seems to be the special object of the manufacturers to adopt methods in their factories and workshops to shorten life, by having unhealthy workshops, no regard for ventilation, cleanliness or fire escapes, and above all, long hours. If the Ontario Factory Act, when put into force, will assist in improving the condition of the growing evils it will deserve the thanks of all who desire the prosperity of the country. After an experience of twenty-eight years, I have come to the conclusion that it is no easy matter to educate the employer or employés as to their duty in trying to adopt means of improving the place where the greater part of their lives is spent. The employer on the grasp for the almighty dollar, and the employés not having sufficient interest in their own welfare, the only hope is the law of the land, to compel employer and employés to respect the laws of health for the good of the country. For example: If we work in a factory without ventilation or sunshine, where there is a putrid atmosphere caused by glue, paste, gas and water closets without ventilation, what can we expect but disease in all its forms, fevers of all kinds, impure blood, pale, bleached faces, to finish up with consumption and death? In the bookbinding trade nine-tenths of the men die of consumption, caused by long hours and unhealthy workshops. Any man who has been in charge of a large number of girls could portray sufferings that would make legislators think before they appointed politicians to such important positions as Factory Inspectors. You are aware how many girls are employed in the workshops of Ontario. They are to be the future mothers of the province; and all who have had experience will admit that a large portion of them have contracted disease of some kind that their children will suffer from. In my opinion you would accomplish much good by preparing a list of questions to medical men of Ontario relating to this subject. I have had conversation with one of the oldest medical men in this city, and his experience sustains my own. The result of long hours and unhealthy workshops is premature death. There is no act on the statute book which should give a greater boon to the people than the Factory Act. It places all employés in the same position, it provides for the health and education of our young, and raises human life to a higher standard than dollars and cents. A manufacturer, when he is stock taking, writes off annually so much per cent. for depreciation in value of his plant, but not to his fellow beings whom he employs. They cost him nothing, except so much per hour; and what does it matter to the grasping short-sighted employer if their health is impaired? That is none of his business! Therefore the necessity of the law to provide for the following suggestions:

1. Weekly wages in cash (Friday.)

2. Proper ventilation caused by shafts, and all windows to open from the top.

3. Good light, so as to admit sunshine.

4. Wherever there are girls, a dressing-room to be combined with the water-closet, properly ventilated, and with an abundant supply of water.

5. The same provision for men.

6. An ample supply of drinking water, separated in all cases from the dressing-room.

7. Wherever a building exceeds two flats high, an iron stair fire-escape to be provided, under a heavy penalty.

8. All doors to open outwards, and by no means to be locked or bolted during working hours.

9. Wherever girls are employed in factories a dining-room to be provided, separated from the work room.

10. Hours not to exceed ten working hours a day, with one hour a day for meal, for five days; five hours on Saturday. The short time system is so well known by all intelligent men, that the year 1887 is too late to speak of its benefits.

HUMORS OF THE BUREAU.—Among the replies sent in to the Bureau are many of a humorous nature—conscious, and otherwise. The pleasantry indulged in is not always of a sort that would stand quoting; but here and there genuine wit and humor sparkle among the replies, and a collection of the best things would be worthy of a page or two in any of the magazines. In most cases the Bureau is made the butt of the joke; the hired man is occasionally a target, and the non-progressive farmer is frequently put upon the spit of the correspondent's pen. Out of the mass we select the following from the pen of a merry miller of the county of York, as a specimen of a natural style of clean humor. But it must be remembered that while it is used here, hundreds of alleged jests and quizzical grips are mouldering in the lumber room of the Department.

PAYMENT OF WAGES.—There is no fixed day for payment of wages. One of the firm being the chief hand in the mill, and his son, a lad of 18, being the helper, both are content with board and clothing; but the lad being inclined to indolence receives his duds with a grudge. On the farm the other member of the firm superintends and does chores, but gets only board and decent raiment. Two old men help him, and two young men: all get good board. The two old men receive about $100 each per year, just as they call for it, and the young men receive about $180 each.

HEALTH AND SAFETY OF WORKERS.—The general health of those employed in the mill is fair, but the boss is a little crippled with sciatica in winter, and it hangs to him like sin. The mill is well ventilated when the windows are up. When a wash is required, the flume being handy, we take a dip in it. Regarding the water supply, it is not at all times satisfactory. In times of hard frost and in summer drouths water is scarce, and then the mill will not grind faster than a hungry dog would lick. No wise man would drink the creek water, yet the corporation of Toronto have an eye to it for drinking purposes. If they get it they will get worse than cholera along with it. The mill door is the only means of escape in case of fire, but it is ample, and is never locked or bolted during working hours.

RUNNING TIME.—The mill has not been idle during the year; only for a short time in harvest, and in seeding time, a little slackness occurs, the farmers at those seasons being busy in the fields. Downright laziness at times interferes with the work, both in the mill and on the farm. Rainy days are always held sacred by the farm hands. In the mill the hours of running are regulated by the amount of gristing offered, and the urgency of those requiring quick returns. Saturday is the busy day in the mill, the farmers seemingly having a preference for that day in which to bring their grists.

SHORT HOURS OF LABOR.—The working hours have not been shortened during the year. We jog along in the old way, exactly as we have for forty years; therefore there is little difference in our conduct and character, although I am safe in affirming that the frivolities of youth have been left behind long ago, and a settled determination to eschew dissipation and do right remains, and guides employers and employed.

INDUSTRIAL STRIKES OR LOCK-OUTS.—There is hardly enough material among us to produce a strike or a lock-out. In the mill the boss and his boy have occasionally, on a very cold day, locked themselves out, preferring the atmosphere around the kitchen stove to the unbearable pinching frost reigning around the millstones.

THE INDUSTRIAL STATISTICS OF ONTARIO.*

I have been asked by Mr. Wright to prepare for this convention a paper on some subject connected with industrial matters in Canada. This would be in itself an embarrassment of riches were the necessary data available for the treatment of all such matters, for in Canada we have men employed in almost every line of industry that is pursued by the peoples of Europe or America. But then we do not know much of what we have, or what progress we are making, or about the condition of our industrial classes. We have the usual government reports, dealing with such subjects as finance, trade and commerce, immigration, the progress of settlement, public works, the administration of justice and the education of the people. We have also a decennial census, which is perhaps ample

*This paper was read at the third annual session of the National Convention of chiefs and commissioners of the various Bureaus of Statistics of Labor in the United States, held at Boston in June, 1885, and published in the proceedings of that Convention. It is reproduced here in response to numerous requests.—A. B.

enough for a nation in leading strings; but besides being taken only once in ten years it happens to us, as to communities and commonwealths of greater pretensions, that half of the next decade is gone by before the results of our census are all known. In some of the Provinces we have just begun to recognize the value of industrial statistics, and a beginning of regular statistical work has been made. In this, as in nearly all other progressive movements in the Dominion, the lead has been taken by Ontario, and perhaps there is no Canadian topic germane to the objects of this Convention that would prove more interesting or acceptable to its members than some account of the Province of Ontario and its industrial condition.

In a series of very able papers that were printed several years ago in the North American Review, David A. Wells paid a compliment to this province which, I have no doubt, many of his fellow-countrymen regarded as a wild exaggeration, but which, to those who know the country, was nothing more than an unadorned statement of facts. Mr. Wells, wrote of it as follows:

North of lakes Erie and Ontario and the river St. Lawrence, east of lake Huron, south of the 45th parallel, and included mainly within the present Dominion province of Ontario, there is as fair a country as exists on the North American continent; nearly as large in area as New York, Pennsylvania and Ohio combined, and equal if not superior to those states as a whole in its agricultural capacity. It is the natural habitat on this continent of the combing-wool sheep, without a full, cheap and reliable supply of the wool of which species the great worsted manufacturing industries of the country cannot prosper, or, we should rather say, exist. It is the land where grows the finest barley, which the brewing interests of the United States must have if it ever expects to rival Great Britain in its present annual export of over eleven millions of dollars worth of malt products. It raises and grazes the finest of cattle, with qualities especially desirable to make good the deterioration of stock in other sections; and its climatic conditions, created by an almost encirclement of the great lakes, especially fit it to grow *men*. Such a country is one of the greatest gifts of Providence to the human race; better than bonanzas of silver, or rivers whose sands contain gold.

As to the influence of climatic conditions on the human product of the country, it is hardly necessary to refer to the athletic records of America. We have village Hanlans in every lake port: and looking out on Toronto bay any evening at this season of the year one may see many a fair young maiden who deftly shows the play of the cedar blade in the row-lock. At exhibitions of foot-ball, lacrosse and other manly sports, where skill and pluck and muscle are indispensable qualities in the good player, thousands of people assemble and witness the contests between opposing clubs with as keen a zest as any Greek or Roman of the brave days of old. And to give one other instance, I may venture to say that for tests of endurance and courage the annals of modern warfare afford none more severe, or that have been more nobly borne, than the recent exploits of our volunteers in the Northwest. Young men from the farmstead, the workshop, the counting-room, the college and the lawyer's desk were called at a day's notice in mid-winter to start on a march of two thousand miles and face an enemy, every one of whom was a veteran buffalo hunter, trapper and sharpshooter, and who in joining the standard of revolt had counted well the cost. The alternate riding in open cars and tramping through deep snow with the mercury below zero on the north shore of Lake Superior: the swift marches on foot across the prairies in the Saskatchewan country, often knee-deep in water; the hard fought battles of Fish Creek and Batoche, and the gallant charge upon the rifle pits: the chase for days after Big Bear through long stretches of woods and across muskeg land: the suppression of the half-breed revolt and the ending of an Indian war in ninety days,—this is a record that would give an added fame and lustre to veterans in the field.

These, I know, are not industrial facts, but they are facts which give point and force to the observation of Mr. Wells, that Ontario has the climatic conditions which especially fit it to grow men: and, other circumstances being equal, the odds are on the side of the best breeds of men in the rivalries of nations.

But in some other respects Mr. Wells hardly does Ontario justice. Within its limits as now settled, the province extends over ten degrees of latitude and twenty degrees of longitude. Its breadth, from Point Pelee on Lake Erie to Fort Albany on James' Bay, is more than seven hundred miles, and its length, from Point Fortune on the Ottawa River to Rat Portage on the Winnipeg, is more than a thousand miles. It is larger than the States of Ohio, Indiana, Illinois and Michigan by 10,000 square miles; larger than

Iowa, Minnesota and Wisconsin by 11,000 square miles; larger than the six New England States with New York, New Jersey, Pennsylvania and Maryland by 25,000 square miles; and larger than Great Britain and Ireland by 78,000 square miles. It is only 4,000 square miles less than the French Republic, and only 8,000 less than the German Empire. It is a country large enough to be the seat of a mighty nation, and its situation on the great lakes is one that any state or empire of the world might envy.

But Ontario has something more to boast of than a broad expanse. It has a fertile soil, an invigorating climate, vast forests of merchantable timber, treasures of mineral wealth, and water-power of limitless capacity. It has extensive areas which grow a better sample and a larger average yield of the staple cereals than any other portion of the continent; and it has more extensive areas not yet brought under cultivation, which may be converted into grazing fields of unsurpassed richness suitable for the production of the best qualities of butter and cheese. In a report on the trade between the United States and the British Possessions in North America, made by Mr. J. R. Larned, of the United States Treasury Department, in 1871, it was observed that—

> Ontario possesses a fertility with which no part of New England can at all compare, and that particular section of it around which the circle of the great lakes is swept forces itself upon the notice of any student of the American map as one of the most favored spots of the whole continent, where population ought to breed with almost Belgian fecundity.

Of such a country it is something to say that the people who occupy it are proving themselves worthy of it. Highways and railways have been opened in all directions; mills, factories and markets are being established wherever settlements extend; and the beat of the pulse of commerce is being felt in the remotest townships.

The province justly boasts of a stable government and beneficient laws. The burden of local taxation, never heavy, has been lightened by the distribution of several million dollars of surplus money out of the government treasury. Provision has been made for the necessities of the unfortunate and the afflicted by the establishment, support and management of public institutions. The public school system is at once practical in its operation and responsive to the requirements of the people. Agriculture is greatly encouraged by grants for the maintenance of agricultural societies, by the valuable work accomplished at the Agricultural College and Model Farm, and by a systematic effort to ascertain the agricultural status of the country and to record its progress from year to year. Efficient means have been provided for the care and improvement of the public health, and for weakening the force of those conditions which favor disease and tend to shorten the period of life. The labors of the pioneer have been lightened and cheered by the security of a homestead right in his land, and by the building of highways to give him ready access to the market towns of the older settlements. A great impetus has also been given to the manufactures and commerce of the province by the large sums of public money granted as subsidies for the construction of railways, and the fruits of this policy are only beginning to ripen. What they will be twenty years, or even ten years hence, the most sanguine citizen cannot venture to predict.

But in addition to the measures taken by the Government to promote the moral, educational, and material interests of the province, mention should be made of the large tract of disputed territory which has recently been declared to be the possession of Ontario by a decision of the Judicial Committee of the Privy Council. By this decision the right to a territory of nearly one hundred thousand square miles in extent has been secured, which possesses a wealth of timber, minerals and fisheries that may be made a source of generous revenue for a century to come, if not for all time, and capable of sustaining in thrift a population equal in numbers to that of any state in northern Europe.

Such is Ontario in its more general relations, and to gentlemen who are enquiring into large problems of government it may be of interest to state that at the inception of Confederation we tried in that province the one chamber system, composed of eighty two members (now increased to ninety) elected by the people once every four years; that the administration of affairs is entrusted to a Cabinet or Committee of members possessing the confidence of a majority of the House; that legislative Acts have dealt with every subject under the jurisdiction of the provincial constitution with the solitary exception of direct

taxation: that so carefully have measures been framed and considered that only five Acts have been effectually disallowed in a period of eighteen years; and that after making liberal provisions for every branch of the public service, paying out $4,000,000 as subsidies to railway enterprises, and distributing $3,400,000 to the local municipalities, the government has to-day a surplus of $7,000,000, nearly all of which is invested in first-class securities or deposited in the chartered banks of the Dominion. Our experience, we believe, has demonstrated that for a people capable of self-government and in a state or province of a Federal Union, the bicameral system is not a necessity: and to students of economic subjects, whose work lies in the direction of ascertaining facts that concern the well-being of the industrial classes, I regard the result of our experiment as an important fact.

Before venturing to refer to the people of the province in their industrial relations, it is proper to remind you of the difficult nature of the task of treating the subject either exhaustively or instructively. With us, the necessary store of information has not yet been gathered for that purpose, and without facts and figures extending uninterruptedly over a considerable portion of time one cannot generalize with safety. Statistics collected at intervals of ten years may or may not indicate truly the march of industrial progress. The industries of a country may undergo a revolution in ten years. Besides, one census year may be in a period of inflation and the next in a period of depression. In one, the commerce and manufactures of a country may be booming; in the next they may be in a state of collapse. It may happen that each decennial year is a fat year, like 1870 and 1880; or that each is a lean one, like 1875 and 1885. Of what value are cyclic figures under such contingencies, and what can we expect to establish by them? We must know the situation at every point in the cycle before we can be sure of anything, even in a general way, and especially of anything so fitful and uncertain as the demand for cotton goods or the yield of the wheat crop. In the year 1882, for instance, our fall wheat average in Ontario was 26.3 bushels per acre, and in 1884 it was 24 bushels. But in the intervening year it was only 10.6 bushels; and if any one of these was depended on as representing the average yield of the province it would obviously be very misleading. In England the averages of the production of grain crops are based on the returns of twenty years, and I doubt if trustworthy averages can be obtained in less time. So, also, it must be with industrial statistics of any kind. Patient collection of data must precede every generalization, whether it be as regards average quantities or the enunciation of principles.

But taking such statistics as are furnished by the censuses of the Dominion, and confining myself to those of 1871 and 1881, which alone appear to have been taken with a reasonable degree of accuracy, I find that for each of those years, in Ontario, the total population and the classes by occupations, together with the rates of increase for the decade and the totals of classes, were as follows:

Classes.	1881.	1871.	Rate of increase.
Total population	1,923,228	1,620,851	18.65
Agricultural class	304,630	228,708	33.20
Commercial class	44,548	29,088	53.14
Domestic class	33,804	26,805	26.11
Industrial class	129,982	93,871	38.46
Professional class	23,356	16,754	39.40
Miscellaneous class	94,442	68,198	38.48
Totals of classes	630,762	463,424	36.10

One of the striking features of this table is, that, while the rate of increase of the total population was only 18.65 per cent. in the decade, the rate of increase of the classes by occupations was 36.10 per cent., or nearly double. In each of the classes the increase is large, but in the commercial class it is nearly three times greater than the rate of increase of population. The number of merchants and shopkeepers rose from 7,638 to 10,219; of commercial travellers, from 344 to 1,053, and of railway employes, from 1,931 to 5,074. There is no reason to doubt the accuracy of these figures, especially when it is considered that each census year was in a period of inflation.

The agricultural class, it will be observed, numbers nearly as much as all the other classes, and it is unquestionably true that agriculture is our most important industry. The number of farmers and farmers' sons in 1871 was 226,883, and in 1881 it had increased to 300,554. But, unfortunately, farm laborers appear to have been classed with laborers in general (the numbers for which are given as 62,179 in 1871 and 78,122 in 1881) and it is impossible to say what their rate of increase has been. There is, of course, no record of the rate of wages for those years, but returns obtained for the last three years show that in Ontario, as well as in the principal agricultural States of the American Union, the tendency of wages has been downward. The average wages of laborers employed for the six or seven months of the working season in 1883, including board, was $19.28; in 1884 it was $17.70; and for the current season it is only $16.45. Three causes are generally assigned for this steady drop,—(1) a decline in the price of farm products, (2) a check to the movement of population to the west and north-west, and (3) a general introduction of labor-saving implements on the farm. The last is, I think, the most important of the three, especially in the effect had upon harvest wages. Until recently it was supposed that self-binders could only be employed to advantage on the large farms of the prairies, but the scarcity of harvest laborers and the continued rate of high wages made the introduction of them at last a necessity. Among the more enterprising farmers the question had been settled several years ago, and the advantage of the self-binder was gradually recognized, while at the same time desirable improvements were made in the implement and the cost of producing it was cheapened. It was demonstrated that a self-binder would dispense with the services of at least four men at the time when help on the farm is most urgent and when the rate of wages reaches its highest point, and last year three thousand new machines were put into operation in Ontario, setting free the labor of at least twelve thousand men. The effect was immediately noticed in the slackened demand for harvest hands, as well as in a marked fall in the rate of wages.

It is now seen very generally that the self-binder may be used to economic advantage on farms of moderate size, and that its employment makes the farmer to a large extent independent of the hired man; and this year manufacturers are completing eight thousand new machines in anticipation of a rapidly growing demand. It is also seen that the necessity no longer exists of offering inducements to immigrants of the working classes, and agents of the province are no longer employed in promoting the emigration of working men from England. To that extent at least the collection of labor statistics has been useful in Ontario, for under the bonus system the touters for steamship companies (who have been most active in this work) have not discriminated very wisely, if at all; and a large proportion of the immigrants that have reached the province during the past fifteen years have simply been what Carlyle would call "swarmery" from the east end of London and the southern and western portions of Ireland, who are of comparatively little use in any sphere of labor on this continent.

The censuses for 1871 and 1881 show that while there were 107 manufacturing industries in existence in the former year, the number in the latter had increased to 127—four having become extinct during the decade and twenty-four new ones having been

established. The following are the statistics for the two census years, together with the rate of increase or decrease in the decade :

Schedule.	1881.	1871.	Rate of increase.
Number of industries	129	107	20.56
Number of establishments	23,190	19,043	21.25
Number of employés	118,308	87,281	35.55
Amount of yearly wages	$30,583,541 00	$21,415,710 00	42.80
Average yearly wages	258 51	245 36	5.32
Value of raw material	91,151,006 00	65,114,804 00	40.00
Value of product	157.989.870 00	114,706,799 00	37.73
Value of net product per hand	564 96	568 19	—0.56

The average number of employés for each establishment shows a slight increase in the decade, having been 4.58 in 1871 and 5.10 in 1881. This does not indicate that, as a rule, there has been any marked development of the factory system, yet in some industries there is evidence of considerable expansion. Thus, there were 173 agricultural implement works in operation in 1871, employing 2,143 workmen ; in 1881 the number of establishments was reduced to 141, while the number of workmen was increased to 3,201. In 1871 there were two car and locomotive works in operation, employing sixty men ; in 1881 there were twelve, employing 1,622 men. In 1871 there were five cotton factories, with 495 operatives ; in 1881 there were eleven, with 1,683 operatives. In 1871 there were twenty-six musical instrument factories, employing 387 men ; in 1881 there were twenty-nine, employing 817 men. In 1871 there were 426 tanneries, employing 1,584 men ; in 1881 there were 316, employing 1,528 men. In 1871 there were 1,837 saw mills, employing 13,851 men ; in 1881 there were 1,761, employing 16,846 men. The average rate of wages appears to have increased in the decade about 5¼ per cent., being $13.15 per annum for each employé ; while in efficiency of labor, as shown by comparison of the net product per hand, there was an apparent decrease of a little more than the half of one per cent., or $3.23 per hand. But in reality what appears to be a decrease in the value of the net product of labor was due to the high cost of raw material relatively to the value of the manufactured article—the increase in one case being at the rate of 40 per cent. and in the other of only 37.73 per cent. Had the value of the product increased at the same rate as the cost of the raw material the net product per hand would have been $586.92 instead of $564.96, and the difference between those figures may be taken as indicating approximately the increased efficiency of implements, processes and skilled labor during the decade.

Leaving the census figures of industries, I come now to deal very briefly with what has been done during the past two years in the same branch of statistical inquiry.

Late in 1883 a Labor Congress was held in the City of Toronto, composed of delegates from trades' unions and other labor organizations in the province. At this Congress a resolution was passed calling upon the governments of Ontario and the Dominion to take steps for the collection and publication of statistics of the working classes of the country. In response to this request the work was undertaken by the bureau of which I am secretary ; but owing to the shortness of the time it was deemed expedient to collect information for the first report only from members of the trade and labor bodies. The total number of workmen for whom complete returns were obtained was 590, representing the leading industries in four towns and cities of the Province. During the past year the scope of the inquiry was extended so as to embrace male and female workpeople, whether members of unions or not, and special agents were employed to collect statistics in the chief industrial centres of the province. Returns were received from 2,853 persons in sixteen towns and cities, and representing 207 occupations and sub-occupations. The following table shows the results in aggregates and averages for

the two years—the statistics for males over sixteen being given separately for 1884 so that comparison may be made with figures for 1883 :

Labor Statistics for 590 workpeople in four towns and cities of Ontario in 1883, and for 2,853 workpeople in sixteen towns and cities in 1884.

Schedule.	Males and Females over and under 16 in 1884.		Males over 16 in 1884.		Males over 16 in 1883.	
	Aggregate.	Average	Aggregate	Average	Aggregate	Average
No. of workpeople	2,853	1	2,565	1	590	1
No. without dependents.....	99	1	750	1	115	1
No. with dependents*.....	1,859	1	1,815	1	475	1
No. of dependents	6,222	3.35	6,135	3.38	1,494	3.15
Hours employed per week...	168,622	50.10	151,453	59.05	31,555	53.48
Days employed in year.....	756,523	265.17	680,088	265.14	148,651	251.95
Yearly wages.....	$1,065,846	$373.59	$1,015,185	$395.78	$262,304	$444.58
Extra earnings	12,437	4.36	12,299	4.80	1,431	2.42
Wife and children's earnings.	19,094	6.69	18,774	7.32	2,962	5.02
Total earnings.....	1,097,377	384.64	1,046,258	407.90	266,697	452.03
Total earnings of persons						
Without dependents	$292,440	$294.20	$250,588	$334.12	$43,343	$376.90
With dependents	804,937	432.99	795,670	438.39	223,354	470.22
Cost of living to persons						
Without dependents	$228,731	$230.11	$189,205	$252.27	$31,075	$270.22
With dependents	725,523	390 27	715,629	394.29	209,880	441.85
With and without dependents	954,254	334.47	904,834	352.76	240,955	408.40
Surplus earnings of persons						
Without dependents	$63,709	$64.09	$61,383	$81.84	$12,268	$106.67
With dependents	79,414	42.72	80,041	44.10	13,474	28.37
With and without dependents	143,123	50.17	141,424	55.14	25,742	43.63

This table may be supposed to make a fairly good exhibit for the working classes of Ontario, but a careful analysis of the details would show that a very considerable number of the wage-earners spent all their earnings, and that the cost of living to others was more than their earnings. In 1883 there were 28 of the 590 who spent more than they earned, 202 who spent all they earned, and 360 who had a surplus. In 1884 it may be stated in a general way that the workers in 15 occupations spent more than their earnings, while those in 14 others spent all their earnings. In 127 occupations the wages exceeded the average amount, and in 80 they fell below it; while in 126 the cost of living was greater than the average, and in 81 it was less.

In addition to this information, returns were obtained last year from employers and employés in eighteen towns and cities showing the rates of wages for the last week in April and the last week in October, and the average of these was computed to show the average weekly rate for the year. The employers of labor gave returns for upwards of 16,000 persons and the employés for 2,800, and it may be stated that the discrepancy in the rates as obtained from the two sources is not wide, notwithstanding the tendency of opposing interests to give extreme figures in opposite directions. One explanation of this probably is, that employers gave wages for all employés on their pay-sheets, whereas comparatively few returns were obtained from female employés, and a much smaller number from employés of both sexes under sixteen years of age.

We have had difficulties in the way of collecting these labor statistics, and in many

* The number of dependents does not include the workers.

instances they could not be overcome. One of the chief of these was a fear that the inquiry had something to do with a scheme of local taxation; but that fear has been found to operate wherever the collection of statistics relating to real or personal property, or to incomes, earnings or products have been undertaken. The diffusion of information may be depended on to remove this prejudice in the course of time. Another of the difficulties has its origin in the sensitiveness of men. It is natural to resent any approach that appears to be of an inquisitorial character, and many are slow to believe that the settlement of matters of great interest to the working classes and to people of all conditions and occupations depends on the careful collection of a mass of facts, one by one. A third difficulty is the political one. With our people, as well as with yours, the science of political economy (if there be such a science yet) has become the foot ball of political parties, and any inquiry that touches the vexed subject of fiscal policies in relation to industries and commerce is certain to be challenged by one party, if not by both.

This leads me to make a remark or two in conclusion. The contentions of parties over the effect of the dealings of government with the employments of men prove that there are some things not accepted as having been finally settled by the political economists. I do not mean merely in relation to tariffs, for, given the best tariff law which the ingenuity of man can frame, there are great interests that would remain to perplex the minds of men and statesmen. All that is embraced in the great subject of socialism is up for settlement, and the working classes and their employers are at present on opposing sides. We can conceive of a state of things in which labor and capital would be found working harmoniously together, each aiding the other and each making the conditions of the other more stable and secure. Is it possible to reach that solution of the question? I see only one way to it, and that is to pursue the scientific method. The subject must be studied as Darwin studied the development of species—by the laborious accumulation of facts. As Darwin gathered thousands of plants and animals of every species he could obtain and studied them in their relation to each other, so must the facts of socialism be gathered and studied. A man of genius, who combines the reasoning faculty with the imaginative, may discover a great truth intuitively, as, Buckle tells us, Goethe discovered the relation of the skull to a joint of the spine. "That is a developed vertebra," the poet-philosopher thought as he turned a human skull out of the sand with his foot; and the scientists have demonstrated the proposition by the slow process of studying skull and vertebra in the relationship of all their parts. In the same way only, I believe, can the laws which govern the interdependence of capital and labor be discovered. We must make a large and varied collection of facts, not promiscuously nor in a purposeless way, but I would say according to the method recommended by Sir James Stephen in pursuing the study of history. Lay down great meridional lines, and pursue the inquiry exhaustively along those lines and between them, and, when all the data are gathered, theory and principle and law may almost be trusted to evolve themselves.

In his lecture on the Office of the Historical Professor, Edward Freeman pays a tribute to two great English writers that should serve as an inspiration to every man engaged in the collection and study of facts. Of Connop Thirlwall, the late Bishop of St. David's, and William Stubbs, the present Bishop of Chester, Mr. Freeman says they stand forth as the two from whom one might always learn without any need to doubt or stumble at what one learned of them.

> Others may know how to tell a more popular tale, others may indulge in more brilliant feats of the imagination; of none other can I say, as I can say of each of them, that his minute accuracy never fails, and his impartial judgment never swerves. In a long and careful study of the Bishop of Chester's writings, I will not say that I have always agreed with every inference that he has drawn from his evidence; but I can say that I never found a flaw in the statement of his evidence. If I have now and then lighted on something that looked like oversight, I have always found in the end that the oversight was mine and not his. After five and thirty years' knowledge of him and his works, I can say without fear that he is the one man among living scholars to whom one may most freely go as to an oracle, that we may feel more sure with him than with any other that in his answer we carry away words of truth which he must be rash indeed who calls in question.

No higher tribute than this could be paid by one historian to another; and it is by like faithfulness to truth, and accuracy and impartiality in the record of economic facts, that useful and abiding work can be wrought, or honor and reputation won, by all who are engaged in the investigations which interest us here.

FOOD IN ITS RELATION TO THE DISTRIBUTION OF WEALTH.*

The old question, Is life worth living? is still asked, and it still awaits an answer which all men will accept. But in almost every case the men who ask, as well as those who try to answer, view the question largely upon its moral and spiritual sides. Issues are raised which have been issues in the schools for four thousand years at least, and problems are proposed the solution of which, if never found, seems bound to be forever sought. The discussion never advances: there is no transmission of results: no torch is handed on: every thinker starts at the beginning, and his light goes out with himself. I do not say that the problems on their philosophical or religious sides are insoluble in the abstract, or that no good purpose is being served in the study of them. I can conceive of aspects in which the study might be of great utility, by enlarging our ideas of man, of the world he dwells in, and of the divinity that shapes all ends.

But the object of this paper is to take up the question in one of the most material of its relations, and see how far life is made endurable by the means for maintaining it.

Shelter, clothing and fuel are necessaries in a climate like ours, but food is necessary in every climate. Waste of living tissue goes on as the result of bodily exertion, and the store of animal heat is lessened with every breath. How much food is required to repair waste and supply animal heat, keeping the functions of life in healthy play? What is an average ration, measured by quantity and value?

The answer to these questions must vary with the climate, as well as with market prices. Men work harder in Ontario than in Florida because nature is less bountiful here than there, and so they require more of the foods which repair waste. The temperature is considerably lower, too, and so they require a larger portion of the more costly foods which keep up animal heat. In one country the chief diet is fruit and vegetables, rich in starch; in the other it is animal products and cereals, rich in albumen. For this reason it does not seem possible to ascertain a ration which, either as to quantity or value, may be accepted as a standard over any very large area of the world. Between Ontario and Ohio or Massachusetts there ought not to be a marked difference either in the kind or quantity of foods, and so far as I have been able to compare the statistics there is none; it is only in the cost of food that the difference appears, and it may be that the data are not sufficient to justify comparison under this head. I shall therefore limit what I have to say on the subject to conditions found in Ontario, as shown by investigations carried on under my own direction.

An effort was made last year to find out the cost of living among the working classes of the province—the cost for rent, fuel, clothing and food, as well as the aggregate cost. The schedule used in the collection of statistics asked for figures under these heads, to be given with as near an approach as possible to accuracy. Of course absolute accuracy in the returns was not looked for. There are few men in any walk of life who could set down the actual figures of a year's food supply, saving the few who keep detailed accounts of house expenses. The cost of rent is known to every tenant, and fuel and clothing may be very closely estimated without the aid of accounts. But food is an every-day requirement in small or large supplies, and I own that I viewed the returns of its cost with no little mistrust. The average for nineteen towns and cities of the province was shown to be $47.67 a year per capita, for an average family of 4.54.† Was this a trustworthy average, and did it possess scientific value? I had no reason to doubt that it was quite as reliable as a great mass of the figures in a census enumeration. But any one who knows how the work is done will not care to accept even the figures of a census as things which cannot lie, for many of them are given at random, and taken as they are given.

Was it possible to verify the returns of the cost of living by actual returns on a

* This paper was read at the meeting of the American Public Health Association, held in Toronto in September, 1886. It is reprinted here as a continuation of the inquiry commenced in 1885 to ascertain the cost of living among the working classes of the province.—A. B.

† The average number of persons in a family in Ontario, according to the census of 1881, was 5.25.

large scale? I applied to a number of colleges and public institutions, and met with a favorable response. Five schools and colleges, four provincial prisons, and four asylums for the insane furnished complete returns of the quantity and value of their food consumption for fourteen days in February, the results of which are summarized in the following tables:

DESCRIPTION OF PERSONS AND RATIONS.

Institutions.	Number.	Number of rations supplied to persons—				Total rations.*
		Under 5 years.	5 to 10 years.	10 to 15 years.	Over 15 years.	
Schools and colleges	5	14	826	2,330	5,708	8,878
Provincial prisons	4	14	364	1,547	17,403	19,328
Lunatic asylums	4	139	145	56	43,733	44,073
Totals	13	167	1,335	3,933	66,844	72,279

QUANTITY AND VALUE OF A WINTER RATION.

Classes of food.	Schools and colleges.		Provincial prisons.		Lunatic asylums.		All institutions.	
	Quan.	Valúe.	Quan.	Value.	Quan.	Value.	Quan.	Value.
	lbs.	cts.	lbs.	cts.	lbs.	cts.	lbs.	cts.
Animal albuminoids	1,815	9,711	0,855	4,295	1,234	6,181	1,204	6,111
Vegetable abuminoids	0,984	2,287	1,950	3,361	1,156	2,740	1,347	2,850
Starchy foods	1,778	3,215	1,343	1,738	1,672	2,626	1,597	2,461
Miscellaneous	0,021	0,953	0,015	0,375	0,028	1,008	0,024	0,832
Totals	4,598	16,166	4,163	9,769	4,090	12,555	4,172	12,254

These averages are computed from returns of food consumed in two weeks of hard winter weather by 5,163 persons of various ages, as shown in the description,—the total quantity of food supplied being 301,549 pounds, and its value $8,857. The schools and colleges show a more liberal diet of animal and starchy foods than the other institutions, and the cost of a ration in them is 65½ per cent. more than in the prisons, and 29 per cent. more than in the asylums. In all classes the average is 2.551 pounds of albuminous foods and 1.597 pounds of starchy foods—the total ration, including tea and coffee, being 4.172 pounds, and costing 12¼ cents. The items of food are shown in the following table (1) for schools and colleges, and (2) for schools, colleges, prisons, and asylums:

* A ration is taken as the equivalent of three meals per day.

WINTER DIETARY.

Food Materials.	(1) Schools and colleges.		(2) Schools, colleges, prisons and asylums.	
	Quantity.	Value.	Quantity.	Value.
	lbs.	cts.	lbs.	cts.
Animal albuminoids:				
Beef	.4457	3.4379	.5041	2.8513
Mutton	.0872	0.7128	.0492	0.3458
Pork, fresh	.0545	0.4002	.0067	0.0492
Cured meats	.0795	0.7115	.0842	0.5567
Fowl	.0075	0.0831	.0032	0.0345
Fish and Oysters	.0549	0.4489	.0334	0.2384
Milk	.9643	1.6435	.4491	0.7709
Cheese	.0116	0.1269	.0072	0.0782
Butter	.0965	1.9521	.0614	1.0969
Eggs	.0131	0.1937	.0057	0.0936
Vegetable albuminoids:				
Flour	.4693	1.0935	.1353	0.2732
Oatmeal and cracked wheat	.0728	0.1720	0648	0.1429
Bread and crackers	4264	0.9781	1.1004	2.3272
Pearled barley	.0042	0.0168	.0157	0.0437
Beans and peas	.0116	0.0265	.0312	0.0631
Starchy foods:				
Corn meal	.0083	0.0182	.0142	0.0344
Rice	.0131	0.0549	.0239	0.0948
Potatoes	.8969	0.6299	.8281	0.6723
Other vegetables	.1798	0.1756	.1048	0.1765
Green fruits	.4253	0.5867	[illegible]	0.1233
Preserved fruits	.0541	0.4888	[illegible]	0.3721
Starch	.0012	0.0132	.0007	0.0122
Sugar	.1579	1.0656	.0883	0.5633
Molasses	.0409	0.1825	.0472	0.2128
Miscellaneous:				
Tea	.0135	0.5563	.0138	0.5291
Coffee	.0078	0.2187	.0068	0.1943
Condiments		0.1780		0.1084
Summary.				
Alum albuminoids	1.8148	9.7166	1.2042	6.1105
Vegetable albuminoids	0.9843	2.2869	1.3474	2.8501
Starchy foods	1.7775	3.2154	1.5967	2.4617
Miscellaneous	0.0213	0.9330	0.0236	0.8318
Total ration	4.5979	16.1659	4.1719	12.2541

This is a winter dietary, and to obtain a standard average for the year it was necessary to get similar returns in a summer month. The beginning of June was selected, but unluckily four of the schools and colleges were breaking up for vacation, and only one of the five made a report. The returns for prisons and asylums, however, were complete,

and so far as it is possible to make a comparison of winter and summer dietaries, and to compute a standard ration for the year. The following tables present in some detail the average ration in the several classes of institutions for the two periods :

WINTER AND SUMMER DIETARIES.

I—COLLEGE. Rations supplied in 28 days to persons over 15 years, 1,936. Quantity of food, 10,980 lbs. ; value, $372.87.

Food Materials.	February, 14 days.		June, 14 days.		February—June, 28 days.	
	Quan.	Value.	Quan.	Value.	Quan.	Value.
	lbs.	cts.	lbs.	cts.	lbs.	cts.
Animal albuminoids :						
Beef	.6534	5.3818	.5374	3.8192	.6054	4.7345
Mutton	.1075	0.8065	.....	.....	.0630	0.4726
Pork, fresh	.0494	0.2963	.....	.....	.0289	0.1736
Cured meats	.1041	1.0600	.0711	0.8778	.0904	0.9845
Fish	.0309	0.3086	.0873	0.6546	.0542	0.4520
Milk	.8060	0.9392	2.9938	2.3254	1.7123	1.5134
Cheese	.0079	0.0794	.....	.....	.0046	0.0465
Butter	.1252	2.5044	.1646	2.3092	.1415	2.4236
Eggs	.0203	0.2734	.1496	1.1010	.0739	0.6162
Vegetable albuminoids :						
Flour	.0900	0.1798	.0910	0.2269	.0904	0.1994
Oatmeal	.0176	0.0529	.0062	0.0187	.0129	0.0387
Bread and crackers	.9568	2.2690	.9913	2.8791	.9711	2.5217
Beans	.0220	0.0661	.....	.....	.0129	0.0387
Starchy foods :						
Rice	.0044	0.0176	.0224	0.1010	.0119	0.0522
Potatoes	.8845	0.4427	.9177	0.7668	.8982	0.5770
Other vegetables	.3122	0.2257	.4002	0.4002	.3487	0.2980
Green fruits	.1649	0.2196	.....	.....	.0966	0.1286
Preserved fruits	.1208	0.7275	.0947	0.7606	.1100	0.7412
Starch	.0071	0.0679	.0075	0.0599	.0072	0.0646
Sugar	.2584	1.3122	.3354	1.9676	.2903	1.5837
Molasses	.0176	0.1058	.0137	0.0998	.0160	0.1033
Miscellaneous						
Tea	.0159	0.8157	.0162	0.8105	.0160	0.8138
Coffee	.0141	0.3413	.0162	0.4052	.0150	0.3678
Condiments	.....	0.2822	.....	0.3603	.....	0.3146
Summary.						
Animal albuminoids	1.9047	11.6500	4.0038	11.0872	2.7742	11.4169
Vegetable albumminoids	1.0864	2.5678	1.0885	3.1247	1.0873	2.7985
Starchy foods	1.7699	3.1190	1.7916	4.1559	1.7789	3.5486
Miscellaneous	0.0300	1.4392	0.0324	1.5760	0.0310	1.4959
Total ration	4.7910	18.7760	6.9163	19.9438	5.6714	19.2599

II—Prisons. Rations supplied in 28 days to persons under 5 years, 28; 5 to 10 years, 504; 10 to 15 years, 2,874; over 15 years, 32,865—a total of 36,271. Quantity of food, 150,478 lbs.; value, $3,529.62.

Food Materials.	February, 14 days.		June, 14 days.		February—June, 28 days.	
	Quan.	Value.	Quan.	Value.	Quan.	Value.
Animal albuminoids:	lbs.	cts.	lbs.	cts.	lbs.	cts.
Beef	.5379	3.0261	.4901	2.4513	.5156	2.7576
Cured meats	.1645	.8669	.1720	.9638	.1680	.9122
Fish	.0044	.0311	.0451	.2668	.0234	.1412
Milk	.1400	.2263	.1881	.2631	.1624	.2435
Butter	.0085	.1447	.0103	.1752	.0093	.1589
Vegetable albuminoids:						
Flour	.1945	.3070	.0437	.1083	.1241	.2142
Oatmeal	.0409	.0899	.0326	.0749	.0370	.0829
Bread	1.6376	2.8035	1.7612	3.3470	1.6953	3.0574
Pearled barley	.0232	.0571	.0234	.0656	.0233	.0611
Beans and pease	.0540	.1033	.0472	.0699	.0508	.0877
Starchy foods:						
Corn meal	.0313	.0784	.0301	.0528	.0307	.0664
Rice	.0292	.1130	.0273	.1124	.0283	.1127
Potatoes	.7012	.5868	.9402	.7649	.8128	.6700
Other vegetables	.4709	.4534	.2123	.1511	.3501	.3122
Sugar	.0365	.2094	.0413	.2230	.0387	.2158
Molasses	.0742	.2971	.0531	.2323	.0643	.2669
Miscellaneous:						
Tea	.0098	.2489	.0101	.2542	.0100	.2514
Coffee	.0047	.0658	.0037	.0444	.0042	.0558
Condiments		.0601		.0650		.0624
Summary.						
Animal albuminoids	0.8553	4.2951	0.9056	4.1202	0.8787	4.2134
Vegetable albuminoids	1.9502	3.3608	1.9081	3.6657	1.9305	3.5033
Starchy foods	1.3433	1.7381	1.3043	1.5365	1.3249	1.6440
Miscellaneous	0.0145	0.3748	0.0138	0.3636	0.0142	0.3696
Total ration	4.1633	9.7688	4.1318	9.6860	4.1483	9.7303

III.—Asylums. Rations supplied in 28 days to persons under 5 years, 280; 5 to 10 years, 240; 10 to 15 years, 76; over 15 years, 88,677—a total of 89,273. Quantity of food, 362,543 lbs.; value, $11,524.14.

Food Materials.	February, 14 days.		June, 14 days.		February—June, 28 days.	
	Quan.	Value.	Quan.	Value.	Quant.	Value.
	lbs.	cts.	lbs.	cts.	lbs.	cts.
Animal albuminoids:						
Beef	.5010	2.6564	.6096	4.1738	.5560	3.4247
Mutton	.0631	0.4203	.0050	0.0352	.0337	0.2253
Cured meats	.0499	0.3894	.0116	0.0883	.0305	0.2369
Veal and fowl	.0038	0.0398	.0023	0.0238	.0030	0.0317
Fish and oysters	.0418	0.2869	.0542	0.3571	.0481	0.3224
Milk	.4809	0.8340	.7748	1.3762	.6297	1.1085
Cheese	.0095	0.0977	.0075	0.0801	.0085	0.0888
Butter	.0775	1.3421	.0749	1.2594	.0762	1.3003
Eggs	.0067	0.1145	.0057	0.0518	.0062	0.0827
Vegetable albuminoids:						
Flour	.0421	0.0932	.2270	0.5286	.1357	0.3136
Oatmeal and cracked wheat	.0737	0.1603	.0819	0.1842	.0778	0.1724
Bread and crackers	1.0005	2.3900	.7400	1.8068	.8686	2.0947
Pearled barley	.0147	0.0433	.0168	0.0428	.0158	0.0431
Beans and pease	.0252	0.0529	.0266	0.0646	.0259	0.0588
Starchy foods:						
Corn meal	.0078	0.0184	.0247	0.0510	.0164	0.0349
Rice	.0238	0.0949	.0239	0.0906	.0238	0.0927
Potatoes	.8699	0.7184	.7235	0.5403	.7958	0.6282
Other vegetables	.5163	0.3832	.4250	0.3829	.4699	0.3830
Green fruits	.0604	0.0841	.0172	0.0330	.0385	0.0582
Preserved fruits	.0587	0.5110	.0341	0.3575	.0463	0.4333
Starch	.0010	0.0173	.0021	0.0146	.0016	0.0159
Sugar	.0970	0.6173	.0996	0.6313	.0983	0.6244
Molasses	.0367	0.1819	.0206	0.0964	.0286	0.1386
Miscellaneous:						
Tea	.0156	0.6466	.0157	0.6363	.0157	0.6414
Coffee	.0124	0.2457	.0086	0.1993	.0105	0.2222
Condiments	.....	0.1155	.....	0.1480	.....	0.1320
Summary.						
Animal albuminoids	1.2342	6.1811	1.5456	7.4457	1.3919	6.8213
Vegetable albuminoids	1.1562	2.7397	1.0923	2.6270	1.1238	2.6826
Starchy foods	1.6716	2.6265	1.3707	2.1976	1.5192	2.4092
Miscellaneous	0.0280	1.0078	0.0243	0.9836	0.0262	0.9956
Total ration	4.0900	12.5551	4.0329	13.2539	4.0611	12.9087

IV.—College, Prisons and Asylums. Rations supplied in 28 days to persons under 5 years, 308; 5 to 10 years, 744; 10 to 15 years, 2,950; over 15 years, 123,478—a total of 127,480. Quantity of food, 524,001 lbs.; value, $15,426.63.

Food Materials.	February, 14 days.		June, 14 days.		February—June, 28 days.	
	Quan.	Value.	Quan.	Value.	Quan.	Value.
	lbs.	cts.	lbs.	cts.	lbs.	cts.
Animal albuminoids:						
Beef	.5147	2.8150	.5765	3.7057	.5452	3.2548
Mutton	.0450	0.3012	.0036	0.0253	.0246	0.1650
Pork, fresh	.0009	0.0052	.....	.....	.0004	0.0026
Cured meats	.0852	0.5442	.0555	0.3340	.0706	0.4404
Veal and fowl	.0026	0.0272	.0017	0.0171	.0021	0.0222
Fish and oysters	.0304	0.2107	.0522	0.3365	.0412	0.2728
Milk	.3845	0.6538	.6452	1.0887	.5132	0.8685
Cheese	.0066	0.0681	.0054	0.0575	.0060	0.0629
Butter	.0577	1.0039	.0587	0.9810	.0582	0.9926
Eggs	.0049	0.0830	.0060	0.0512	.0055	0.0673
Vegetable albuminoids:						
Flour	.0886	0.1587	.1759	0.4116	.1317	0.2836
Oatmeal and cracked wheat	.0629	0.1374	.0676	0.1527	.0652	0.1449
Bread and crackers	1.1906	2.5118	1.0181	2.2351	1.1054	2.3751
Pearled barley	.0170	0.0467	.0184	0.0484	.0177	0.0475
Beans and pease	.0337	0.0682	.0318	0.0652	.0328	0.0667
Starchy foods:						
Corn meal	.0147	0.0360	.0258	0.0508	.0202	0.0433
Rice	.0251	0.0990	.0248	0.0966	.0249	0.0978
Potatoes	.8196	0.6741	.7843	0.6036	.8022	0.6393
Other vegetables	.4991	0.4015	.3674	0.3207	.4341	0.3616
Green fruits	.0441	0.0613	.0123	0.0257	.0284	0.0427
Preserved fruits	.0423	0.3623	.0257	0.2664	.0341	0.3150
Starch	.0008	0.0130	.0016	0.0112	.0012	0.0121
Sugar	.0817	0.5072	.0869	0.5385	.0842	0.5257
Molasses	.0476	0.2150	.0293	0.1331	.0386	0.1746
Miscellaneous:						
Tea	.0139	0.5304	0.142	0.5357	.0140	0.5330
Coffee	.0101	0.1935	0.074	0.1602	.0088	0.1771
Condiments	.....	0.1019	.....	0.1284	.....	0.1149
Summary.						
Animal albuminoids	1.1325	5.7123	1.4048	6.5970	1.2670	6.1491
Vegetable albuminoids	1.3928	2.9228	1.3118	2.9130	1.3528	2.9178
Starchy foods	1.5750	2.3694	1.3581	2.0446	1.4679	2.2091
Miscellaneous	.0240	.8258	0.0216	0.8243	0.0228	0.8250
Total rations	4.1243	11.8303	4.0963	12.3789	4.1105	12.1010

In the summary of the last table two unexpected results are presented,—an increase in the summer consumption of animal foods, and a decrease in the consumption of starchy foods. On reference to the detailed materials, however, it will be noticed that the increase of animal foods is almost wholly in the article of milk, the college ration of

which was two pounds more in June than in February. In starchy foods the decrease is in potatoes and other vegetables and fruits, supplies of which were becoming scarce while yet the new season's crops were not ripe for the market. The quantity of the June ration is slightly less than the February one, but the cost is half a cent (.5486c.) higher. The prisons alone show a decrease in cost; in the college there is an increase of over one cent per ration, and had returns been obtained from all the colleges the June average would unquestionably exceed the February one for all the institutions.

In the Toronto School of Infantry, comprising one hundred men, the following ration is provided :

Articles.	Quantity.	Value.
Beef or mutton	1 lb. 0 oz.	7½ cts.
Bread	1 0	2¼
Potatoes	1 0	1¼
Barley	0 1	
Cheese	0 2	
Sugar	0 2	
Coffee	0 ⅓	4
Tea	0 ¼	
Salt	0 ½	
Pepper	0 1-36	
Totals	3 lb. 6 1-9 oz.	15 cts.

This is an adult ration, and no doubt the component articles have been selected and the quantities determined with extreme care. Like the colleges, prisons and asylums, too, the supplies are procured in large quantities, and it is fair to assume that waste is reduced to a minimum. It is scarcely possible for a private family to purchase food at the same prices or to consume it with so little proportionate waste as an institution like one of our asylums or prisons; it may be done, but it is more likely to be the exception than the rule.

Now let us see how the cost of food, as computed from the working-men's returns, compares with its cost in the schools, colleges and public institutions. At the average of winter and summer rations in these it is $44.17 a year per capita; at the prisons' rate it is $35.51; at the asylums' rate it is $47.12; at the infantry school rate it is $54.75; at the colleges' winter rate it is $59; and at the rate of the college giving winter and summer returns it is $70.30. The working-men's average of $47.67 is therefore something more than a probable one; it is well verified by the statistics gathered from other sources, and I am disposed to think that the cost of living is better known and more accurately gauged in the families of the working classes than in the families of any other class of the community. I have put the ration question to many intelligent men of good circumstances in this city and elsewhere, and the almost invariable reply has been, "I cannot tell," or "I have never thought of the matter." And yet there is no economic question of the day of greater importance than the ration of food. In this province of Ontario, with its 2,100,000 people, it means, at the working-man's standard, an expenditure of $100,000,000 a year, or within $15,000,000 of the value of our field crops last year. We consume that much to keep up existence, and to fit us for earning the ration of to-morrow.

But food is only part of the cost of living. Shelter, clothing and fuel are necessaries also, and when these are provided other calls upon earnings are made which are only less imperative in their character. For an average family of the working classes in the towns and cities of this province the cost of food last year was $216.42, of rent $74.41, of fuel $40.53, and of clothing $86.39—a total of $417.75. The average earnings of workers with dependents (including the earnings of wife and minor children) was $447.60

for the year, so that $29.85 only was left for the almost endless petty requirements of every human household. And these are average figures, the mere fact of which implies that, taking families apart, many are below the standard of their class. Of 1,605 wage-earners with dependents, from whom returns were obtained last year, only 950 had a surplus, the average of which was $93.07; 410 came out even, cost of living being equal to earnings; and 245 closed the year with an average deficit of $56.74. To any one of the last class I should not like to put the question with which this paper opens, "Is life worth living?"

But is there no way out for the working-man in the corner? or is it his own fault that his state is what it is? Is he improvident? Does he live too well? Or could he live better on cheaper food and less of it? Doctors and chemists are able to answer some of these questions definitely, for the subject is in their line, and the detailed items of a ration furnish valuable data for the study of it. But the subject is also in the line of the political economist, and he is taking it up. Within the past year a large mass of information has been collected, especially in the United States, and when all the facts are known, when all the data are gathered, I feel confident that the way out will be found. It concerns the great mass of the people of this continent, for at least 85 per cent. of their number, possibly 90 per cent., depend on daily work for their daily living. Do they get a due share of the product of their labor? Is there a fair distribution between the capitalist and the working-man? If they do get a due share, if there is a fair distribution of the products of industry, I should be disposed to agree with that very able economist, Edward Atkinson, and urge the working classes to live on cheaper foods. But cheaper foods may mean physical degeneracy; and I think it has been conclusively shown by Buckle that, as a fixed condition, they mean a more rapid increase of population than of capital, a corresponding decrease in the rate of wages, a very unequal division of wealth and power; they mean the tendency to a state in which the democratic element is wanting, where the only business of the people is to labor, and their only duty to obey. The statistics available do not answer the question as to the distribution of wealth with sufficient clearness, but they seem to denote that an inordinately large proportion goes to the capitalist. In Canada, as appears by the census of 1881, the total amount paid for wages in the manufacturing industries was $59,408,512, while the excess of products over labor and materials was $70,362,113; that is to say, of $509.03 net product per capita, the working-man received as his portion $233.03, and the employer retained $276. In the United States, as the census of 1880 shows, the amount paid for wages was $947,953,795, while the portion of employers of labor was $1,024,801,847; that is, of $722 net product per capita, the working-man received $347, and his employer retained $375. In Canada 54¼ per cent. of the product of industry is taken for rent, interest and profits, and in the United States 52 per cent. of it is taken, while the remainder in each case is given as wages for the skill and labor required in the work of production.* This may be a fair and just distribution—the presumption is against it; but all data for determining the question are not in the hands of the public, and in a problem so hard of solution as the equitable adjustment of the relations of capital and labor every term of the equation ought to be known. It is not a matter that touches the interests of a class of the community merely; it touches the interests of all classes and of the whole nation. Our greatness, strength and permanency on this continent are intimately dependent on the health, the character, the intelligence and the independence of the working-classes.—for in the face of the Deserted Village we get a universal truth —

> Ill fares the land, to [illegible] a prey,
> Where wealth accumulates and men decay;
> Princes and lords may flourish or may fade—
> A breath can make them as a breath has made;
> But a bold peasantry, their country's pride,
> When once destroyed can never be supplied.

* Allowing ten per cent. for rent, insurance and management, and six per cent. for interest on the amount of capital invested in manufacturing establishments, as given in the census (a very doubtful quantity, however), there remains to the proprietors or capitalists in Canada 33.8 per cent. of the total excess of product over materials, and in the United States 28.8 per cent.

LAWS TO ASSIST AND PROTECT THE WORKING CLASSES.

BY T. C. L. ARMSTRONG, M.A., LL.B., BARRISTER-AT-LAW, TORONTO.

The general functions of government may be referred to under the heads of negative and positive duties. Its negative duties are to protect the person, the property and the reputation of the subject, and to enforce contracts. With the exception of the restrictions necessary to secure these results, government allows the greatest latitude of action to the individual, depending on an enlightened self-interest to supply a proper motive in ascertaining and fulfilling mutual obligations. But, having secured peace, order and law, government is prepared to become actively instrumental in promoting the public welfare and convenience by expressing the will of the people in measures of general utility. This is the positive side of the function of government. In fulfilling this duty, government looks after the general interests of the community and the production of national wealth; it encourages trade and commerce, provides means of communication, develops the resources of the country, and fosters its productions. It also promotes the physical and moral as well as the material welfare of the people by enforcing sanitary measures, maintaining educational and scientific institutions, restraining traffic in liquor, suppressing lotteries, etc., and by caring for those who cannot care for themselves—as in its protection of infants, idiots, imbeciles and lunatics.

This protective care of government extends also to others who are not usually of these helpless classes. The struggle for freedom has removed tyranny, and has resulted in popular government and an almost unrestricted liberty of individual action. But this very freedom of individual action, coupled with absolute protection of property, promotes another species of tyranny in the inequality of condition it invariably produces. This is especially the case where population is dense—the wealthy growing more wealthy and the poor becoming poorer and more dependent.

Governments now recognize that not only the production of national wealth, but its fair distribution is also necessary for the general welfare. But the problem how best to secure a fair distribution of the national wealth without interfering with private rights or enterprise is yet unsolved. Sumptuary laws that aimed at this object by regulating the prices of provisions or the rate of wages or interest have failed, because they could not provide the poor with bread or money. Modern legislation seeks the solution of the problem by improving the condition of the poor, especially the wage-earning class. With this end in view, it provides means for educating children and adults, of improving the relation between employer and employé, of promoting thrift and industry, and of protecting the savings and securing the wages of workingmen.

Most of the laws of this nature are of quite recent date, and spring from enlightened popular governments. The people of Canada, and especially those of Ontario, are favorably situated in this respect; a glance at the laws in force in our province will show that in this class of legislation we are quite abreast with the most advanced nations. We may for convenience classify such legislation under three heads:

1. Laws and institutions designed to improve the condition of the people generally, but especially beneficial to the poor.
2. Laws that aim at equalizing the condition of the people by elevating the legal status of the working classes.
3. Laws that protect the working classes and secure them their wages.

PROVISIONS FOR THE GENERAL WELFARE.—Under this class the following may be metioned:

1. *Education.* A thorough educational system, consisting of—(1) An excellent system of free public schools and practically free colleges, including a school of technology affording cheap tuition in practical mechanics. (2) Public night schools for adults, maintained by public school trustees, and a system of mechanics' institutes supported from the public

funds. These institutions were designed to afford cheap access to good and useful literature and to supplement the school system by night schools, cheap libraries, lectures, etc. They were re-modelled and improved in 1886. (3) Free public libraries, established under the Act of 1882, which authorizes municipalities to impose a general tax for the maintenance of such libraries. (4) Besides these provisions for the general education of the people, the Legislature in 1883 and 1884 passed the Industrial Schools Act, providing for the education of indigent children in some trade or business.

2. *Minors and Apprentices.* Chapter 136 in the Revised Statutes of 1877 makes provisions for the care and apprenticeship of minors. It enables a parent, guardian or charitable institution, with the consent of the minor if a male over fourteen, or a female over twelve, or without such consent if under those ages respectively, to appoint a guardian to such minor by deed, by giving such guardian the rights and duties of a parent or guardian by law. The Act provides that no minor who has been abandoned by his parents or is dependent on charity can be removed from a public or private charitable institution without the order of a judge, mayor or police magistrate. By this Act also a minor over sixteen years of age, if not living with his or her parents, can make a valid contract as if of full age. The Act also provides that a male minor over fourteen years old may be apprenticed during minority, and a female minor over twelve till she is eighteen years of age, and that a mother may so apprentice her children with the consent of two justices of the peace if the father has abandoned the children. Orphans or children whose parents are in gaol may be apprenticed by the mayor, the county judge or the police magistrate. Provisions are also made by the Act for the proper care and tuition of the apprentice and the fulfilment of the articles of apprenticeship.

3. *Interest on Deposits.* Habits of thrift and economy are fostered by giving absolute security and a high interest for small sums deposited by poor people. This is done by means of a savings bank in connection with the Dominion treasury department and another in connection with the post office. These savings banks are intended to assist small depositors, no person since 1885 being allowed to have more than $1,000 on deposit. Of a similar nature is the Ontario Act of 1884, enabling a man to insure his life for the benefit of his wife and children, the proceeds of which shall be free from his creditors.

4. *Legal Procedure and Land Titles.* The comparatively simple and inexpensive legal procedure in Ontario is most directly beneficial to those without means, while the practical abolition of the old intricacies of the law of real estate and the simplification of conveyancing greatly facilitate the purchase of homes by the poorer classes, which will be still further promoted by the extension of the Torrens system of land titles, partially introduced in 1885.

Laws that Affect the Legal Status of Workmen.—These useful laws remove the obnoxious restrictions against servants and workmen that had remained as survivals of ancient slavery to blot the pages of our law books and statutes. The following will show how completely this evil has been remedied and all made equal in the eye of the law:

1. *Abolition of Slavery.* Slavery was abolished in Canada in 1793 by Act 33 Geo. III., c. 7, which declares that no negro shall be brought into Canada in the condition of a slave or remain in theprovince in that state. A further provision prevents the indirect evasion of this law, by declaring that no contracts for personal service for a longer period than nine years shall be legal.*

* By an act of 30 Geo. III., "an Act for encouraging new Settlers in his majesty's Colonies and Plantations in America," the governor or lieutenant-governor of this province was enabled to grant a license for the importing of negroes. By an act of the legislative assembly of Upper Canada, passed July 9th, 1793, the preamble of which asserted that "it is unjust that a people who enjoy freedom by law should encourage the introduction of slaves," and that, "it is highly expedient to abolish slavery in this province so far as the same may be gradually done without violating private property," it was provided that "from and after the passing of this Act it shall not be lawful for the governor, lieutenant-governor or other person administering the government of this province to grant a license for the importation of any negro or other person to be

2. *Trades Unions.* Trades union is a method adopted by workmen to increase the price of labor. Where competition is great owing to the large number of workmen, trades unions are necessary and beneficial, but they were contrary to the laws against conspiracy until they were legalized by Act of Parliament. The Dominion Act of 1872 legalizes these unions, declaring them neither criminal nor civil wrongs. The Act enables workmen to make a united attempt to raise the rate of wages or to better the conditions of labor by giving them full power to form an organized association, which assumes a legal status as soon as it is registered. No power, however, is given such unions to control private contracts, or the sale of goods, or to enforce payment of penalties. Most attempts at united action by workmen are seriously weakened by the excess and the penury of the workmen themselves. The disaffected, not being able to control the actions of others, often sought a remedy in intimidation. To prevent the evils thus arising the legislature during the same year in which it legalized trades' unions (1872) passed an Act to suppress "threats, violence, molestation, or intimidation towards workmen." The Act inflicts a penalty of three months' imprisonment on any person using threats, violence or molestation to force any other person to dismiss or to employ another; to offer or to accept or refuse employment; to belong to or not belong to any society, or to alter the mode of carrying on business. A person is guilty of the acts prohibited if he, along with others, follows the person offensively through the streets, hides his tools, or watches his house or workshop continuously. This Act was in 1875 amended so as to make it more favorable to trades' unions. The threats, etc., prohibited were defined to be only such as would justify a magistrate in binding a man to keep the peace; and the penalties of the Act were declared not to apply to any acts done in the interest of trade combinations unless such acts were indictable by statute.

3. *Master and Servant Act of 1878.* Though slavery has been legally prohibited in Canada for nearly a century, yet in one important particular the spirit of slavery was allowed to remain on our statutes. A servant who deserted his service or failed in the performance of it was guilty not merely of a breach of contract, but of a crime, and was liable to heavy punishment. This anomaly was, however, removed in 1878, by the Act amending the Master and Servant law. The Act repeals all sections of the old Acts relating to contracts between master and servant, and declares that such contracts are to be considered as any other contracts. This beneficial Act, placing the servant on a footing of legal equality with other citizens, blots out the last vestige of old-time slavery.

4. *Married Women's Property Act of Ontario (1884).* Another instance of the subordination of one individual to another by the old law was the subjection of the wife to the husband. Various modern Acts have modified the old common law principle considerably, and the Act above cited gives a married woman full control of her own property, to hold or dispose of it at her own free will.

5. *Arbitration.* The Trades' Arbitration Act in the Revised Statutes of 1877 has never been extensively acted upon, but it might be found a very useful act to masters and workmen by enabling them to avoid the expense and delay of the ordinary courts. It provides a machinery by which a number of masters and workmen may form themselves into a board of arbitration to decide any questions as to their contracts, on which they may from time to time disagree.

6. *Coöperation.* The Master and Servant Act in the Revised Statutes of 1877 contains a clause enabling workmen to enter into an agreement to share in the profits of a business without becoming partners, thus introducing in a measure the coöperation prin-

subjected to the condition of a slave, or to a bounden involuntary service for life, into any part of this province; nor shall any negro or other person who shall come or be brought into this province after the passing of this act be subject to the condition of a slave, or to such service as aforesaid, within this province, nor shall any voluntary contract of service or indentures that may be entered into by any parties within this province after the passing of this act be binding on them or either of them for a longer time than a period of nine years from the day of the date of such contract." The act, however, confirmed the owners of slaves then in the province in their property in such slaves, and declared that its provisions should not extend to contracts for service already made, nor to parents or guardians so as to prevent them from binding out children until they had attained the age of twenty-one years. It also provided that children born of female slaves should remain in the service of the owner of their mother until the age of twenty-five years, when they should be discharged.—A.B.

ciple. But the system of co-operation, so beneficial to workmen, was authorized and regulated by an Act contained in the R. S. O. 1877, and has been since (1884) put on a broader and better basis.

LAWS PROTECTING WORKMEN.—The laws already mentioned have been framed with the object of improving the condition of those who are not able to assist themselves, and of placing them in a position of equality with regard to their contracts. But these provisions have not been found sufficient to protect the weak from the strong, in all cases. Those who have nothing to sell but their labor comprise the greater portion of all large centres of population; competition cheapens labor, and the poor suffer much hardship. Here the law can do little without interfering with private contracts; but many of our laws do this in aid of the poor and the wage-earners, by protecting them from debts, regulating their contracts, and giving special aid in enforcing them.

1. *Exemptions.* The Ontario laws are less strict against poor debtors than those of most countries. A person's tools and implements of trade to the value of $100, his clothing and his necessary furniture to the value of $150, fuel and food to the value of $40, and domestic animals to the value of $75, are exempt from seizure. By an Act passed in 1887, these exemptions are extended to tenants, and to taxes if the occupant is not the assessed owner. The same Act does away with much of the strictness of the common law with regard to rent, and restricts the cost of distress. It also gives the tenant the right to set-off against the rent a debt owing him by the landlord. Imprisonment for debt is practically abolished and almost unknown. A clause in the Master and Servant Act (R. S. O. 1877) forbids a hotel keeper or boarding-house keeper to hold a workman's clothes for more than six dollars of debt.

2. *Attachment of Wages or Salary.* An Act passed in 1874 provides that "no debt due or accruing to a mechanic, workman, laborer, servant, clerk or employé for or in respect of his wages or salary shall be liable to seizure or attachment unless such debt shall exceed the sum of $25, and then only to the extent of such excess."

3. *Contracts with Workmen.* The laws regulating contracts made with workmen include the following: (1) Verbal contracts for service, if for not longer than one year, are declared valid by the Master and Servant Act (R. S. O. 1877). The same Act declares that written agreements made out of Ontario, as to labor to be done in Ontario, may be enforced in Ontario. In 1884 this law was extended to include verbal as well as written contracts of this nature, in order to protect the workmen. But when employers began to hire cheap foreign laborers, and to bring them into the country to compete with those already here, further protection was given the workmen by the Ontario Act of 1886. This Act declares that contracts made with workmen in foreign countries, for work to be done in Ontario, shall be null and void as against the workmen so brought into the country. Such contracts, therefore, may be enforced by the workmen against the employer, but not by the employer against the workmen. The result must be that the employer will no longer make such contracts, nor import laborers.* (2) The Seaman's Act (Dominion) of 1873 and its amendment of 1875 protect sailors in contracts with their employers. By these Acts masters of vessels are bound, under a penalty of twenty dollars for each

* In striking contrast to this modern law is the provision of an act amending the Canada Company Act, 1825, passed July 15th, 1828, section 4 of which declared that any artificer, clerk, handicraftsman, mechanic, gardener, servant in husbandry, or other laborer, not being under seventeen years, might contract with the Company to serve (or proceed to serve) it faithfully in Upper Canada for any period not exceeding the full term of seven years, to be computed from the day of the indenture; and that it should be lawful for the Company in any part of his majesty's dominions to maintain an action against any person who should employ, retain, harbor or conceal such artificer, etc., with intent to deprive the Company or its agent of his services; and in case the Company should recover a verdict in the action, they should in addition to damages found by the verdict recover and have treble costs. Section 5 provided that any two or more justices of the peace might punish by fine not exceeding £50, or imprisonment not exceeding three months, or both, any wilful violation of such indentures by any ill-behavior of such artificer or other laborer; and the justices were also authorised to hear and determine all complaints, differences and disputes which might happen to arise between the Company and its employés, and to make such order and award as might seem just, and to enforce such order or award by execution against the goods, effects or other property of the persons or party against whom such order or award was made, or by arrest and imprisonment not exceeding three months.—A. B.

infraction, to enter into a written agreement with the sailors they employ, setting forth the full terms of the contract, the number and the occupations of the crew, the hours of labor for each, and any special rules to be observed while on board. This contract must be left open to inspection. Sailors have also, by law, a lien on the ship for their wages.

4. *The Factories' Act.* The Ontario Factories' Act, passed in 1884 and proclaimed law in 1886, will prove of the utmost benefit to employés in factories by removing many evils at present existing. Its chief provisions relate to the prevention of accidents, and of injury to the health and to the employment of women and children in factories. It declares that it shall not be lawful to employ any child, young girl or woman in a factory so that their health shall be permanently injured. This injury will be presumed on any of the following misdemeanors, for each of which the Act prescribes a penalty of six months' imprisonment, or a fine of $100 on the owner of the factory, and a fine of $50 on the parent of the child :

(1) Employing a boy under twelve years, or a girl under fourteen, in a factory. But by an amendment made in 1887 such children may be so employed during July, August and September, in preparing fruit, etc., for canning, provided it is done in a room separate from the canning or cooking.

(2) Employing any child between twelve and fourteen, without a certificate from its parent or guardian, dated and showing the child's age.

(3) Causing women or children to work more than ten hours a day, or sixty hours a week.

(4) Not allowing one hour each day at noon for meals, which, if so ordered by the inspector, must be taken outside of the factory.

But in case of accidents, causing stoppage or other necessity for extra work, the Inspector may allow twelve and one-half hours a day or seventy-two hours a week, but for not more than six weeks each year. The Act further protects children and women by declaring that no child shall be allowed to clean machinery while it is in motion, and that no girl or woman shall clean mill gearing in motion, or work in certain dangerous places around machinery. These restrictions, however, do not apply where the child or woman is working at home, where no machinery is employed. The owner of a factory shall, within one month after starting a factory, give the inspector notice whether he intends to employ children or not, and shall hang up, in a conspicuous place in the factory, a notice showing the hours during which the children work, the provisions of this Act, the name and address of the inspector, and the clock by which the time is to be regulated.

The Act also makes general provisions for the welfare of the operatives of factories :

(1) As to health.—That the factory shall not be overcrowded ; that it shall be kept clean and well ventilated ; and that the owner shall remedy any evil in these respects on notice from the inspector under a penalty of twelve months' imprisonment or a fine of $500.

(2) As to the prevention of accidents.—That dangerous parts of machinery and dangerous places shall be securely guarded ; that machinery shall not be cleaned while in motion if the inspector so directs ; that all hatches, hoists and elevators shall be made with catches, so as to be safe from accident.

(3) As to security from fire.—That all doors must open outward ; that means of extinguishing fire be provided and kept ready ; that all doors to fire escapes shall be unbolted ; that in factories of three or more stories high, in which persons are employed above the second story, tower stairways or fire escapes must be provided, unless dispensed with by direction of the inspector.

Inspectors of factories are appointed under the Act, to whom large powers are entrusted and to whom notice of any injury or death by accident or fire must be given.

5. *The Workmen's Compensation Act (Ontario, 1886).* The law has always allowed compensation for injury caused by the negligence or misconduct of others, and in case death were caused the legal representative of the deceased could bring the action. But if

he did not or could not do so there was no remedy in Ontario till 1886, when the law was amended by allowing the action to be brought in such cases by and in the name of all who are to be benefited by it. This provision of the law is for the general public, but before a workman could obtain a verdict in such an action he had to combat an old, well-established principle of law that placed him at an unjust disadvantage. This is, that if the business at which the workman was employed be of a hazardous nature he must be presumed to have known that fact before entering on it, and to have undertaken to assume all risk of death or accident for the sake of employment and wages. The Act above mentioned removes this unjust presumption of law from our Ontario courts.

This Act, which, however, does not extend to domestic servants, declares that a workman has the same compensation and remedies against the employer as if the workman had not been a workman of, nor in the service of, the employer, in case of personal injury caused by any defect in machinery or negligence of the employer or of any person placed in authority by him. The Act applies largely to railways, and declares the proprietors liable for damages if overhead bridges are less than seven feet above the top of the car, or if the spaces round the frog and guard rails are not filled with packing. The compensation is limited to the three years' previous earnings of the claimant, and notice of the claim must be given within twelve weeks after the injury, and action must be brought within six months. A workman cannot bar his right to this compensation by any agreement unless the consideration be something other than mere employment, and be such as will be considered ample, adequate and reasonable by the court, and no railway employé can bar his claim by any contract whatever. If, however, the railway has a provident association of at least as favorable terms to its members as that of the Grand Trunk, the Act does not apply to it except so far as relates to injuries to employés who are not members of the provident association of the railway.

6. *Laws giving special assistance to workmen in enforcing their contracts.* Our Ontario laws are particularly careful of wage-earners in the facilities afforded them for collecting wages. This is especially true of several laws passed within the last few years. The following will show what has been done to secure the workman the fruit of his toil: (1) The Master and Servant Act, as it appears in the Revised Statutes of 1877, has provisions whereby a servant can, by a summons to a magistrate written one month after termination of the contract, compel the master to pay his wages. This was, in 1884, amended by allowing the summons to be taken within one month after the last payment, or after the termination of the contract, whichever comes last. (2) The Ontario Mechanics' Lien Law is very favorable to workmen. The first Mechanics' Lien Act was passed in 1873, but it has been frequently amended since—as in 1875, by giving subcontractors a lien; in 1878, by protecting the owner in *bona fide* payments up to 90 per cent. of the contract price; in 1882, by making wages a first lien on 10 per cent. of the contract price, and in 1884, by remedying several defects in the law. The main provisions of the law as it now stands are as follows:

Any person who does work on or who supplies materials for a building in the course of erection has a lien for the amount of his claim against the interest in the property of the person for whom the work was done or the materials supplied. If the work was done by contract, the liens of the contractor, subcontractors, workmen and material men can attach the property only to the extent of the contract made with the owner. All payments made by the owner in good faith to the contractor up to 90 per cent. of the contract price are a discharge of the liens to that extent, whether the contractor have paid those under him or not. But the remaining 10 per cent. of the contract price is held by the subordinate liens, whether it has been paid the contractor or not. And the workmen's and subcontractors' liens attach it until ten days after the work is finished, when they cease unless notice of them has been given in writing to the owner. The Act of 1882, however, makes the lien for thirty days' wages a prior claim on the 10 per cent. of the contract price. This lien attaches the property without registration until thirty days after the work is done, or after the last day's work done by the lien holder, and cannot be defeated by any agreement between the owner and the contractor, and is not affected by any claim the owner may have against the contractor. The owner may retain 10 per cent. of the contract money to pay this lien. Any person may waive his

lien by a special written agreement, but not so as to affect the lien of any other person: thus, a contractor cannot waive his lien if doing so would defeat the liens of subcontractors or workmen under him. All these liens, that of the contractor, the subcontractor, the workman and the material man—exist without registration until thirty days after the materials were supplied or the last day's work was done in each case. (1) The lien of those who have contracted directly with the owner attaches the property for the full amount of their claims. (2) The liens of those who have been employed by a contractor can only attach what is unpaid to the contractor, but until ten days after the work is done they attach 10 per cent. of the contract price, which must be reserved to satisfy the liens; after the expiry of those ten days, these liens cease to attach the 10 per cent. of the contract, unless notice in writing shall have been given to the owner. (3) The wages liens, however, attach 10 per cent. of the contract price for thirty days after the last day's work done by the lien holder, and that without registration or notice.

To keep any of these liens good beyond the thirty days mentioned they must be registered. This may be done during the thirty days or while the work is going on, or even before the work is begun, and when registered the liens are continued for sixty days longer, when they cease, unless in the meantime proceedings have been taken to enforce them.

Several persons may join in registering a lien, and several or all lien holders may join in one suit to enforce their liens. If, however, any one lien holder bring his action in time it is taken to be brought in favor of all lien holders of the same class (*i.e.* under the same contractor) whose claims have been filed in the court or registered within thirty days after the entry of the suit.

The following points must be noted in regard to these liens against buildings: (1) If a contractor or workman furnish material for a building in course of erection, such material cannot be seized for any of his debts except the price of the material itself, and when incorporated in the building it belongs to the owner of the building. (2) If there is a mortgage existing on the building before the work is begun, a lien for repairs or work can attach only the increase in the selling price caused by the work or materials. (3) It has been held that if a mortgage be put on by the owner to secure money to be advanced as the building progresses, such money is advanced on the security of the increased value of the building, and the mortgagee's claim is prior to that of lien holders who have registered their liens after the registration of the mortgage. (4) If the person for whom the work is done has no interest in the property there is nothing of course which the lien can attach, as where a builder fails to complete an agreement to purchase the land on which he is building, or overdraws the instalments of a progress mortgage, and fails to complete the building.

A person doing work on a chattel has a lien for the price of his work, and after three months may advertise and sell the article to get his money.

7. *The Wages Act (Ontario, 1885).* This Act makes the most ample provision for securing workmen their wages by giving priority to wages in all matters coming under the Creditors' Relief Act in all assignments for the benefit of creditors, and in all cases of winding up companies. The Act gives workmen in all these cases priority over all other creditors for their wages to the extent of three months' wages, provided the workmen were in the employment of the debtor or the company at the time the proceedings authorized by these Acts were taken, or had been so within one month of that time. Besides having this priority for three months' wages, workmen are entitled to rank as ordinary creditors for the remainder of their claim.

LABOR ORGANIZATION IN ONTARIO.

BY DANIEL J. O'DONOGHUE, TORONTO.

In dealing with this subject, the intention is to outline as nearly as possible the gradual growth of labor organizations and the principal causes which led, and still continue leading, to that end. There is no desire to hazard opinions as to whether or not these causes have been, or are to-day, sufficient in themselves in justification of trade and other combinations of those who earn their bread in the sweat of their brow, or whether or not these organizations should be classed as unnecessary in themselves or as inimical to the interests and liberties of either the individual or the state. These are phases of the subject which are left for settlement or discussion to those most directly interested, be they capitalists, agriculturists, wage-earners or legislators. Whatever the ultimate result in this particular, one incontrovertible fact is that organized labor does exist as a body, social as well as politic. In every centre of population, where building and manufacturing industries exist, there are to be found trades' unions; while, from its purposely arranged constitution, the order of the Knights of Labor has a foothold in nearly every hamlet in the country.

In the early days of Canada, up to the time of the utilization of steam power in the passage across the ocean to and from Europe, and for some years after, the influx of immigrants into Canada was not greater than the power of absorption by the country, either in construction of extensive public works or in the reclamation of the forest. There was plenty of work for the mechanic, and he who desired to become a farmer had license to choose his own location, even as a squatter. These latter went into the unsettled districts, staked off a farm, and set themselves to work to improve and cultivate without the preliminary of securing a government deed or patent, and in time their titles were recognized as valid in law. In those days every immigrant to Canada was a valuable addition to its population; there was vacant land to spare, and in plenty, for all who desired to become their own employers; every new locatee found in his near neighbors, already settled, good friends and willing helpers in the work of making a clearing; there were comparatively few really wealthy people, and the very poorest were buoyed by the well-founded hope of future prosperity. Of these are nearly all of the closing generation of Canadian farmers, and all of whom are wealthy and well-to-do. In those early days, also, the settler found in the building of such public works as the Rideau canal, the St. Lawrence and the Welland canals, and the Grand Trunk railway, a ready means of earning money from time to time, and to that extent bettering his condition financially and at a time when the operations of his farm did not require his labor.

Immigration.—About the year 1850 a perceptible and radical change began to evince itself in the mode of ocean transportation; steamships began gradually taking the place of sailing vessels, and the volume of immigration increased in rapid proportion into both the United States and Canada. Society as a whole began to change, although perhaps the change was so gradual that it was at the time almost imperceptible. Rapidly-extending railway communication throughout western Canada soon began to exert its influence as a potent factor in bringing about a still greater change in the cycle of succeeding years, because of the facilities thus afforded immigrants from the seaboard to reach that portion of Canada where the English-speaking population preponderated. Besides, the successive governments used every effort to encourage and induce the hosts emigrating from Great Britain to make Canada their land of promise and their home. That these efforts had their effect is best evidenced by the fact that while the number of immigrants to Canada from the year 1829 to the year 1868, both included, was only 1,128,470, it increased in the next succeeding fifteen years to 1,568,405, as indicated by the annual reports of the Department of Agriculture and Immigration within these periods. The following table gives the number of emigrants from Great Britain and Ireland to all countries and the number

of immigrants to the Dominion of Canada and the Province of Ontario from all countries for the sixteen years 1871-86, together with the expenditure of the Dominion and Ontario respectively for immigration objects during the same period :

Years.	Emigration from Great Britain and Ireland.	No. of Immigrants settled in—		Immigration Expenditure for—	
		The Dominion.*	Ontario.	The Dominion.	Ontario.
				$	$
1871	252,438	27,773	25,842	63,796	29,713
1872	295,213	36,578	28,129	126,124	57,750
1873	310,612	50,050	39,184	234,001	159,179
1874	241,014	39,373	31,720	251,121	134,641
1875	173,809	27,382	21,751	296,693	94,061
1876	138,222	25,633	19,123	284,066	44,001
1877	119,971	27,082	17,879	183,673	46,265
1878	147,663	29,807	17,940	185,846	31,975
1879	217,163	40,492	28,827	176,343	39,650
1880	332,294	38,505	24,726	181,533	52,982
1881	392,514	47,991	25,200	206,181	34,826
1882	413,288	112,458	34,206	346,543	30,415
1883	397,157	133,624	40,494	420,761	47,764
1884	304,074	103,824	33,494	431,498	43,370
1885	264,986	79,169	21,052	310,272	19,088
1886	330,881	69,152	22,467	300,920	16,837

While the successive governments were making every exertion to populate the country as rapidly as legitimate encouragement and liberal expenditure could serve that end, it was evident that abuses were creeping in through the cupidity of some and the supposed philanthropy of others in shipping to Canada classes from Great Britain in nowise suited to the requirements of this country then or now. This is clearly indicated in the report of Mr. Thomas White, junior, special immigration agent to Great Britain, addressed to Hon. John Carling, Commissioner of Agriculture for Ontario, under date of October 9th, 1869, wherein, after citing what he understood his instructions to be—to further the cause of emigration generally—he says he was always "bearing in mind that it was no part of the policy of the government to encourage what is known as pauper immigration." In speaking of Miss Rye and her intention, he said that she "has recently proposed a scheme for the emigration of the little Arab children from the streets of London, and has been successful in receiving very liberal subscriptions towards this object. I have very grave doubts whether such a scheme will not prove a failure. We have in Canada already, all our large cities abound with them, a class of poor children who seem utterly uncared for, and are growing up into candidates for our criminal docks and prisons. What to do with them is a question which has excited the earnest thought of benevolent people among us. To add to them, by the importation of a new instalment of the same class from the purlieus of the great city of London, and with habits already confirmed by association with the most vicious, would appear to be very doubtful policy. The question is worthy of the attention of the government; as should the movement for an Arab emigration be permitted to proceed and fail to be successful, those who have contributed to it under the assumption that it met the approval of the government of this country would have just cause to complain."

* The Dominion returns for 1871 and 1872 did not include the number reported through Customs.

Despite this opinion of Mr. White adversely to the scheme of Miss Rye, she succeeded in securing financial assistance from the government in after years, and imported large numbers of those waifs into this country and still continues to do so, although not without earnest protestation on the part of labor organizations in Canada. These latter contend that, notwithstanding the good intentions of Miss Rye and a host of other real or pretended philanthropists both in this country and in Great Britain, for years past and now, Canada has enough destitute and orphan children of its own to provide for, either by adoption or otherwise, without being called upon to ultimately assume the care and protection of many of those waifs referred to in the report of Mr. White.

Prior to and in the year 1869 the immigration policy of the Canadian government was restrictive as respects immigration from abroad, for in that year a law respecting immigration and immigrants was enacted, under the provisions of which a duty of one dollar was levied on every passenger over one year of age coming into the country. This law also provided that if any lunatic, idiotic, deaf and dumb, blind, or infirm person, was brought as a passenger, and not being of an immigrant's family, the captain of the vessel in which such person arrived was obliged to enter into a bond in the sum of $300 as an indemnity should such person become a public charge. Under the provisions of this law, also, the governor in council had authority to prohibit, by proclamation, the landing in Canada of pauper or destitute immigrants until the captain of the ship paid into the hands of the Canadian immigration agent sufficient for their temporary support. In 1872 the act just referred to was amended by providing that the duty of one dollar be increased to two dollars. The amendment also provided that immigrants contracting to work in Canada for six months on money advanced, and refusing to carry out their contract, were punishable by a fine of $20 and imprisonment until paid; also that any bond or note given, or money advanced to defray passage money, may be recoverable in Canada.

Whether this law remained a dead letter or was repealed is not quite clear, but a radical change must have developed itself in the system of Canadian immigration about the time referred to, for the committee of the labor congress of 1873, to whom was referred the question of cheap and imported labor for consideration and report, expressed themselves in the following words:

> Your committee would recommend that this congress condemn the practice of importing labor into this country . . and your committee also condemn the practice of the government in paying a premium to persons so engaged.

Although this report was adopted, yet an amendment, which was indicative of a strong feeling on the subject, was moved "that the report be referred back to the committee with instructions to add, in strong language, their condemnation of the system pursued by the Local and Dominion governments in granting large sums of money for immigration purposes."

The evils of the system of immigration becoming aggravated instead of otherwise, despite the protests of the previous year, the Canadian labor union, at its session at Ottawa in 1874, adopted the following report on the subject:

> Your committee . . view with alarm the gigantic proportions assumed by the immigration movement of late, and consider it a question of paramount importance to the working classes of this country, inasmuch as they are taxed to import workingmen of all trades and callings to compete with them in an already overcrowded labor market, thereby lowering the price of labor and bringing to the country a class of men that are not at all required. . . Your committee feel that they cannot close their report without entering their protest against the large sums of money that have been granted for immigration purposes, knowing as they do that most of it has been expended in giving luxurious sinecures to agents who delude the people of the old countries, and send out a class of men that we already have too many of.

Both the congress held at Toronto in 1873 and that held at Ottawa in the following year, as well as every other labor congress held since, were heartily in accord with Hon. Mr. McKellar, Minister of Public Works for Ontario in 1872-3, when he said that "an effort should be made by the farmers (of Ontario) to endeavor to hire immigrants by the year, instead of by the month or summer season, as by that means the newly-arrived immigrant would not be thrown on his own resources in the winter, when it is difficult to secure work, and before he has been enabled to save sufficient money to provide against such a contingency." Strange and unaccountable as is the fact, when

agricultural immigrants once spend a season in a Canadian city or town, after having worked on a Canadian farm for a time, they will submit to almost any treatment and hardship in urban labor life rather than return to farm work, no matter what wages may be offered them. Whether justifiable or not, the invariable complaint of this class is that under all circumstances the farmer complains that wages are too high, that he allows the farm hand no time as his own between daylight and dark during week days, and very little even on Sunday; and that the farmer is ever complaining that he does not get enough work done for the wages he is paying, be the same high or low.

Labor organizations in Canada to-day point with some satisfaction in support of their opposition to the importation of immigrants from the cities of London, Manchester, Liverpool, and other centres of British population, to the following impartial remarks of Lieut.-Col. G. T. Denison, now police magistrate of the city of Toronto, while special immigration commissioner to the British islands, in 1874, on behalf of the province of Ontario, in his report to the Hon. A. McKellar:

> I devoted my arguments to a great extent to men in the unions (the National Laborers' unions) for two reasons. In the first place, in the farming districts the best men and the most enterprising are those in the unions. In the second place they are more ready to emigrate, as they are not so entirely under the control of the landlords or farmers, and are much more easily moved.

Col. Denison also, in the same report, devoted his attention to a class of persons of whom the labor organizations have been complaining for many years, and over whose operations they have fruitlessly sought government supervision and control, viz., the passenger brokers. Speaking of these, Col. Denison says:

> This is an important element that cannot be overlooked. There are in Great Britain and Ireland over twelve hundred agents of the Allan line alone; the total number of passenger brokers I do not know. These are people who make a business of selling tickets to emigrants; they have no interest in it nationally—their interest is their commission on the sale of tickets. Their commission on an assisted passage to Canada is lese than the commission on a passage to the western states—particularly so on one to California. . . I have heard it said that there have been instances of agents getting a man an assisted passage to Quebec for £4 5s., leaving him to get a free pass by rail to London or some point further west, and selling him the tickets to take him from Detroit into the western states.

The committee on immigration, at the meeting of the Canadian Labor Union at St. Catharines in 1875, presented the following report upon the subject, and the same, after careful consideration, was adopted:

> Your committee still view with the strongest disapprobation the system of immigration as conducted by the government of this country, and consider it a gross violation of the economic laws to import such a large amount of skilled labor into the country while the market is already overstocked, and to set such labor in competition with the at present only half-employed artisans of Canada.
>
> We also desire to record our opinion that it is a great injustice to the workingmen of Canada that the articles of which they are the everyday consumers are very heavily taxed on their importation into the country, while, on the other hand, there is a bonus given on the labor which they have to sell to earn their daily bread. And further, that if we are to have free trade in labor in this country, there should not be any artificial means used to bring skilled labor into the country, as, in the opinion of your committee, there cannot be free trade if we are taxed on that which we have to sell.
>
> We also desire to express our deep regret that the government of the day have not seen fit to act on the suggestion of the last congress of abolishing all immigration agencies, as there is not any necessity for them.

The labor congress held in Toronto in 1883 found no change for the better in the immigration system so strongly and emphatically condemned at previous meetings of a like character, and repeated its protest. The congress of 1886, held in the same city, is also on record upon the same subject in the following resolution, which was unanimously concurred in:

> That the continued and systematic expenditure of large sums of public money in assisting and encouraging to this country paupers, indigents and orphans from abroad, is a gross injustice to the people of Canada, and in particular to the working classes: therefore, be it resolved that it is the imperative duty of the governments to peremptorily abolish the existing immigration system, and that due care should be exercised in preventing the introduction of such classes into Canada, whether they be sent under the authority of the imperial government or through any other channel.

Trades Unions.—Prior to any recorded and definite immigration policy on the part of any Canadian government, the germ of organization among wage-earners had taken root and began its development in this country, for as early as the year 1827 the boot and shoe-

makers of Montreal were banded together and holding periodical meetings, while the French-speaking members of the "art preservative" had their *Circles* for trade protection and the inculcation of principles which ultimately became those of almost every trade in the land. In 1852 these latter were merged into the National Typographical Union at a meeting held in Cincinnati, and that again into the International Typographical Union at Albany, N.Y., in 1869. As in Lower Canada, the printers in Upper Canada, most of whom in the latter province were immigrants, were among the first to organize, for as early as 1832 Toronto had its "Printers' Society," for the regulation of wages, the care of its sick and destitute, the burial of its dead, seeing to the proper teaching of apprentices to the trade, and other work of a like character. It may be remarked of this body, also, that, except for a short time during the Rebellion of 1837, it has never ceased its existence or to regularly hold its meetings from the first mentioned date up to the present time, as is attested by the successive series of minute books in the custody of that body.

The printers of Toronto, there is every reason to believe, were the first organized labor body in Canada to enter into international affiliation with sister combinations in the neighboring republic, where the concentration of labor in large and increasing centres of population rendered organization into unions necessary much earlier than was the case in Canada. The knights of St. Crispin, the painters, and the ship-carpenters and caulkers in Canada shortly followed the example of the printers in the matter of forming trades unions, and these again at irregular intervals by the operative tailors, the stone-masons, the ship-laborers of the city of Quebec (incorporated by Act of Parliament in 1863 as a benevolent society), the bricklayers, the plasterers, the lathers, the iron-moulders, the boiler-makers, the amalgamated carpenters and joiners, the tinsmiths, the American brotherhood of carpenters, the sandstone-cutters, the limestone-cutters, and the builders' laborers, as well as other callings doubtless of which no authentic information is procurable. Cause there must have been, else these various bodies would not have sprung into existence,—it had developed itself in the workshop, in the factory, in the mill, on the building scaffold, in carrying the hod, and wherever men were employed at handling the pick and shovel. Strange as it may appear to many of our day, strikes of longer or shorter duration, and for divers reasons were, in most instances, the precursors and not the subsequent results of such organizations. Experience had taught the toilers that, without confidence in one another, without preconcerted line of action, and without leaders in whom they had faith, the remedying of grievances, whether of low wages or of any other character, was in most instances an improbability, if not altogether an impossibility; and realizing this, organization, however crude, was a certain result.]

Canadian Labor Union.—In 1874 the Canadian Labor Union held its annual session during August 4th, 5th and 6th, in the parliament buildings at Ottawa, the free use of the library and committee rooms having been kindly accorded by the premier; while the third and last annual session of the same body was convened on August 3rd, and continued on the 4th and 5th of the same month, in the city of St. Catharines. The annual meeting for 1876 was to have taken place at the city of London, but owing to the stagnation and general depression of business at this time existing throughout Canada these labor organizations, which still retained their existence, were so crippled financially that they were unable to send representatives, and, as a consequence, the union did not meet as intended. That the labors of the sessions of 1873–5 were pregnant of results aimed at by those most interested, both as respects legislation then sought and secured as well as legislation since secured, cannot be gainsayed by those most opposed to trade and labor organizations.

Trades Congress.—For some years immediately anterior to 1873 circumstances had rendered it very evident to those taking an active part in the labor movement in the Dominion that something more than isolated action on the part of each union was required, and as a consequence the first thoroughly representative congress of trades' unions in the

Dominion of Canada was convened in the city of Toronto on the 23rd of September of that year, the Trades' Assembly of that city having assumed the responsibility of summoning the meeting on the occasion. The objects which were to be considered at that gathering were chiefly limned in the opening address of welcome to delegates by the president of the Trades' Assembly, and which was as follows:

GENTLEMEN,—In the name and on behalf of the Toronto Trades, I rise formally to open the proceedings of the congress, and in doing so, with their desire, to extend to you the right hand of fellowship, and welcome you to this the queen city of the west. You meet to-day to inaugurate one of the grandest events in connection with the labor movement that has ever taken place in the Dominion of Canada. Its significance may be gathered from the fact that in all the centres of industries in the Provinces of Ontario and Quebec the working classes have determined to centralize their energies to promote the adoption of those laws and regulations which must be established for the good and protection of the laborer. The time has come when questions affecting the interests of labor must be taken hold of, and by the workingmen dealt with in a prompt and systematic manner, when the many problems touching the moral and social position of the masses must be solved. You meet here to speak as with the voice of one, what is your opinion of the great future of the workingman, both as to his connection with himself, his fellow and his country. It is true we have much to be thankful for in the past; still there is a far more important future before us, and this day, in this Dominion, the hearts of the working classes are filled with joyous expectation, and I venture to say that the result of your deliberations at this congress will tend to influence the great ruling powers and make them feel that your efforts, though apparently unimportant, are of a magnitude which cannot be over-estimated. The future greatness of this country depends, to a very large extent, upon the identity of relationship between capital and labor, and I think I speak your sentiments and feelings when I say that you do not meet with a view of infusing a spirit of discontent and dissatisfaction; you do not meet to create hostilities between capital and labor, but you do meet for the purpose of disseminating the true principles of unionism, to foster a spirit of common brotherhood throughout the Dominion, to seek the promotion of those laws which shall make no distinction of man as man. To this end, and with these objects, you are called upon, in the first place, to establish a Canadian labor union. Its necessity is beyond doubt. There are three great ruling powers which help to make up life, namely, politics, commerce and religion. Now, I know that as far as trades' unions are concerned, the question of politics is a very delicate, and, as far as discussion is concerned, a prohibited one; but I look around in the political world and see a thorough system of organization, by which means communities are enabled to send their favorites to Parliament; and even in the halls of legislature I find a perfect unanimity prevailing, and as a natural consequence certain individuals are put and kept in power. But wherever there is disorganization so there will be corresponding failure; and, I say, if it is necessary for the constitution of parliament and the establishment of governments to have organizations, so I say it is also highly necessary that there should be a thorough system of organization among workingmen, so that they may raise themselves into a good moral position, and enjoy the rights and privileges of citizenship. Again, look into the commercial world and any casual observer will find that a perfect understanding runs through the whole—the money markets, the business transactions of the world, carried on to the wonder and astonishment of everybody—and all through following out the simplest of principles, that of unity. And I say that if it is necessary for national and personal prosperity, for commercial success, to have a perfect understanding, so it is highly necessary, both in a monetary and social aspect, that the workingmen should understand one another. Again, look into the religious world and note the wonders of united action, the success of missionary enterprises, the uprooting of systems of barbarity and cruelty, the establishment of charitable and benevolent institutions, the emancipation of the slave, and the education of the masses in principles of honesty and integrity; and I say if unity of action is required to carry out this wonder-working power, so much more is it necessary that the working classes should unite, and place themselves in a good and happy state, so as to enjoy life while they have it. I say that the necessity for a Canadian labor union is beyond doubt; its importance is beyond estimation. It is impossible at the commencement of so great a movement to predict the grand result that must follow a wise and judicious management of the Canadian labor union. It is said of St. Peter's at Rome that one cannot fully grasp the splendor and magnificence of the structure till after repeated visits. So I look upon this great movement, so comprehensive in its character and so noble in its purposes, and I am at a loss fully to realize its importance. But if the past is anything to go by, we may form some idea of its results. Note the changes of time. There was a period in the history of this country when Canada abounded in negatives, and not in positives; when the men of Canada had no gardens, no orchards, no corn fields, no books, no churches, no palaces, no ships—when mental darkness covered the land, and cruelty and superstition prevailed. But time, in her onward progress, bids us regard Canada in the sunshine as well as in the shade. Centuries have rolled on, civilizing and evangelizing our forefathers, expanding their minds, enlarging their store of knowlege, implanting a love for the arts and sciences, and also the social duties of life; Time has urged her sons to cultivate the arts of peace and to foster a true and and noble brotherhood. And if such great things can be said of the past, how can we fully estimate the importance of this Canadian labor union, where the whole body thinks and acts as one? It occurs to me that we are planting a standard this day, the influence of which will be felt by the workingmen all their lives, and the mottoes inscribed on this unfurled banner shall be an incentive to generations yet to come. Workingmen are beginning to realize the fact that they are possessed of power, power to think and power to act, and with increased knowledge will come increased power. And the time is not far distant when the great men of the land will find it absolutely necessary to consult with the workingmen in the matter of legislation, both political and commercial. In conclusion, I urge upon you the necessity of being wise and moderate in your deliberations and enactments, and let those who are watching your movements at this the first Canadian labor congress be compelled to admit that we are honest, earnest, and prudent workers.

The attendance at this congress very clearly indicated that organized labor, in its efforts to educate its membership, had been making much more progress than those not of its ranks gave credit for, there being delegates present from Toronto trades' assembly,

typographical union, amalgamated engineers, bakers, knights of St. Crispin, coopers, bricklayers and masons, machinists and blacksmiths, carpenters and joiners, operative tailors, 'longshoremen, painters and iron moulders, of Toronto ; coopers, knights of St. Crispin and tailors, of St. Catharines; iron moulders, machinists and blacksmiths, amalgamated engineers and knights of St. Crispin, of Hamilton ; bricklayers and masons, tailors, carpenters and joiners, typographical union, freestone cutters and limestone cutters, of Ottawa ; knights of St. Crispin and amalgamated carpenters and joiners, of London ; coopers, of Bowmanville ; iron moulders, of Cobourg ; and coopers, of Seaforth. Although not represented on the occasion by delegates, the following labor organizations by communication signified their unqualified approval of the objects for which the congress had been called together, viz. : Typographical union, No. 160, Quebec ; knights of St. Crispin, Barrie ; coopers' union, No. 14, Thorold ; typographical union, No. 145, Montreal ; coopers' union, No. 16, Oil Springs ; coopers' union, No. 9, Ingersoll ; knights of St. Crispin, No. 372, Orillia ; coopers' union, No. 10, Goderich, and iron moulders, of Peterborough.

During the three days' session of this congress of 1873, among other important questions affecting the immediate interests of the wage-earning classes, the lengthy and able discussion and consideration of the subjects of prison contract labor, imported and cheap labor, arbitration in labor disputes, shorter hours of labor, and the establishment by the Government of Canada of bureaus of labor statistics, indicated in no uncertain manner the advanced ground taken upon the legislation considered necessary in relation thereto and the best method of its attainment. Before concluding its deliberations the congress resolved itself into a permanent organization, under the title of the Canadian Labor Union, and the scope of its intent and mission is clearly set forth in general terms in the preamble to its constitution, which reads as follows :

Whereas the workingmen of the Dominion of Canada, in common with the intelligent producers of the world, feel the necessity of co-operative and harmonious action to secure their mutual interests, just compensation for their toil, and such limitation of the hours of labor as may tend to promote their physical and intellectual well-being, and believing that the causes which have operated in the past to the detriment of labor may nearly always be traced to the want of proper organization in the various branches of industry:

Therefore, to unite the energies of all classes of labor in the Dominion of Canada for the purpose of guarding their inherent rights, we, the representatives of the workingmen of the Dominion of Canada, in convention assembled, do hereby enact and adopt the following constitution, etc.

Which constitution governed while the body had an existence.

As in 1873, the Toronto Trades and Labor Council once again summoned a Canadian labor congress to meet in that city on December 26, 1883. The circular issued as an invitation to the different labor bodies throughout Canada to send delegates to the Congress intimated—

That the broadest scope may be allowed in the selection of questions for deliberation and action by the congress, the committee have not deemed it advisable to lay down a programme for guidance, believing that the exigencies of the present time, coupled with past experience, in most cases dearly bought, will readily suggest the questions which should, and most likely will, receive that prompt and unmistakeable consideration which their gravity demands.

To this call twenty-seven labor bodies responded, and on the day mentioned forty-seven delegates presented credentials, some from trade unions and others from assemblies of the Knights of Labor. That the time for summoning the congress was opportune and, at the same time, not too soon, is well illustrated by the increased number of important questions which came before the congress for consideration during its three days' session. Among them were the subjects of Chinese immigration, shortening the hours of labor, assisted European immigration, factory legislation, the Seamen's Act, property qualification for municipal office, manhood suffrage, the land question, extension of magistrates' powers respecting employés' wages, the insolvency act, land grants, tax exemptions, government aid to colleges, abolition of piece work, boards of arbitration, organization of female labor, pauper immigration, bureaus of labor statistics, the temperance question, the Torrens system of land transfer, an employers' liability act and factory inspectors. The ability with which each and every one of these, in some cases complex questions, were discussed, as indicated by the reports which appeared in the daily papers, gave every evidence of close thought and sound judgment, begotten of experience and

education in the world's school. This congress adjourned on the evening of December 28th, subject to call, when deemed advisable by the Toronto Trades and Labor Council.

In the intervals between the meetings of the different congresses referred to, the Toronto Trades and Labor Council bore all the responsibility as well as all the cost incidental to persistent agitation, and the petitioning of the several parliaments praying for the enactment of such laws as were indicated as needful by the labor congresses. The records of the several sessions of the provincial legislature, as well as those of the Dominion parliament, since 1872, and more especially during the past five or six years, show with what assiduity these petitions have been presented. If these petitions to the parliaments in most instances failed in receiving that attention which, in the minds of those sending them at least, their importance entitled them, they certainly were ever-recurring reminders to legislators that organized labor was patiently and persistently knocking at the doors of the law-making halls for remedial legislation.

Early in 1886 the Toronto Trades and Labor Council, by virtue of the power conferred at the labor congress of 1883, exercised its authority in summoning another labor congress to convene in Toronto on the 14th of September of that year. This congress was the most widely representative, both as to localities and organizations, as well as number of delegates in attendance, of any so far held in Canada. The delegates present represented Toronto, Hamilton, London, Ottawa, the city of Quebec, St. Catharines, Belleville, Guelph, St. Thomas, Oshawa, Merriton, Port Dalhousie, Windsor, Uxbridge, Amherstburg, Ingersoll, Port Perry, Thorold and Parkdale. They also represented sixty-seven different organizations and numbered one hundred and ten delegates. This congress was also remarkable for its practical and business-like method of proceeding with its business, as well as for its calm and withal logical reasoning as to the many and diverse subjects necessarily coming under its attention. Among the most important questions which were dealt with during the three days' sittings may be noted the following, viz.: Manhood suffrage, direct labor representation in parliament, municipal representation, amendments to municipal law, property qualification of aldermen and councillors, the publication of the assessment rolls of cities and towns, the increasing of exemption of income tax from $400 to $800, the abolition of income tax for municipal purposes, the adoption of the Torrens system of land transfer, cumulative voting and a system of grouped constituencies for parliamentary elections, abolition of the whole present system of encouraging immigration, convict labor, factory inspection, intemperance, payment of wages weekly, workshops' regulation as to overcrowding and ventilation, more stringent legislation as to Chinese immigration, giving legal effect to the awards of boards of arbitration, permanent organization of the congress, abolition of the Dominion senate, legal tender money, organization of female labor, that any terms or stipulations other than the rendering of an equivalent for wages insisted upon or demanded by employers in the engagement of employés be by law declared null and void and any attempt at their exaction to be declared a criminal offence punishable by imprisonment for a specific time, a Dominion employers' liability act, the abolition of contract in respect of national, provincial and municipal works, priority of claim for wages under any Dominion insolvency law that may be passed, against the monopolization of the public lands, against tax exemptions, reduction of hours of work to eight daily on government works, against armed and uniformed private police or detective bodies, respecting the appointment of police commissioners and their election by the people in lieu, and declaring that the office of Lieutenant-Governor should be filled through election by the people. Each and every one of the foregoing subjects was fully debated and voted upon in the affirmative. The congress finally adjourned to meet again in the city of Hamilton at a time in 1887 to be determined by the executive.

Trades' Councils.—In the year 1881 was held in Toronto the twenty-ninth annual session of the International Typographical Union of America. Long before this date the Toronto trades' assembly, so vigorous in 1872-3, had practically ceased to exist, but advantage was taken of the stir in local trade organizations caused by the holding of the typographical convention in that city, and a trades and labor council was organized. This body has

ever since been the foremost and most persistent of the labor organizations of Canada in all that pertains to the interests of the toilers of this country, and, judging by its history, it is likely to so continue for years to come. To its efforts is due, in a great degree, all the legislation secured in the provincial legislature of late years, and which especially affected the interests of wage-earners. It may be recorded to its credit also that the Toronto Trades and Labor Council has ever governed itself in strict accordance with the lines laid down by the several labor congresses held in Canada up to this date, and in the deliberations of which it has always had on important voice. That a reaction in labor circles in Toronto had been the result of the formation of the trades' council is shown by the fact that in the provincial elections of 1882 that body determined on and placed a labor candidate in the field for the representation of West Toronto in the legislature. The effort failed of success, but although foiled in this attempt to secure direct labor representation in that legislature, the labor bodies of Toronto had not lost faith in their cause or its justice, as was evidenced four years later. Toronto Trades and Labor Council has at the present time worthy adjuncts in its work in the trades councils of Guelph, St. Thomas, Oshawa and London, as well as in the Central Labor union of Hamilton.

KNIGHTS OF LABOR.—Despite the fact that a new and popular element, the order of the Knights of Labor, was rapidly developing itself among the toilers of the neighboring republic for some years previously, it was not until 1881 that this organization found a foothold on Canadian soil. While in accord with some of the old-time and valuable methods of the ordinary trades' unions, this order went much farther in the breadth and catholicity of its principles. Its founders struck a popular chord in the minds of the working masses when in the preamble to the constitution governing that body, they announced that :

The alarming development and aggression of aggregated wealth, which, unless checked, will inevitably lead to the pauperization and hopeless degradation of the toiling masses, render it imperative, if we desire to enjoy the blessings of life, that a check should be placed upon its power and upon unjust accumulation, and a system adopted which will secure to the toiler the fruits of his toil ; and as this much-desired object can only be accomplished by the thorough unification of labor, and the united efforts of those who obey the Divine injunction that "in the sweat of thy brow shalt thou eat bread" we have formed the order of the Knights of Labor with the view of securing the organization and direction by co-operative effort of the power of the industrial effort, and submit to the world the objects sought to be accomplished by our organization, calling upon all who believe in securing the greatest good to the greatest number to aid and assist us :

I. To bring within the folds of organization every department of productive industry, making knowledge a standpoint for action, and industrial, moral worth, not wealth, the true standard of individual and national greatness ;

II. To secure to the toilers a proper share of the wealth that they create ; more of the leisure that rightfully belongs to them ; more society advantages ; more of the benefits, privileges and emoluments of the world ; in a word, all those rights and privileges necessary to make them capable of enjoying, appreciating defending and perpetuating the blessings of good government ;

III. To arrive at the true condition of the producing masses in their educational, moral and financial condition, by demanding from the various governments the establishment of bureaus of labor statistics ;

IV. The establishment of co-operative institutions, productive and distributive ;

V. The reservation of the public lands—the heritage of the people -for the actual settler : not another acre for railroads or speculators ;

VI. The abrogation of all laws that do not bear equally upon capital and labor ; the removal of unjust technicalities, delays and discriminations in the administration of justice, and the adopting of measures providing for the health and safety of those engaged in mining, manufacturing or building pursuits ;

VII. The enactment of laws to compel chartered corporations to pay their employes weekly in full, for labor performed during the preceding week, in the lawful money of the country ;

VIII. The enactment of laws giving mechanics and laborers a first lien on their work for their full wages ;

IX. The abolishment of the contract system on national, state and municipal work ;

X. The substitution of arbitration for strikes, whenever and wherever employers and employes are willing to meet on equitable grounds ;

XI. The prohibition of the employment of children in workshops, mines and factories, before attaining their fourteenth year

XII. To abolish the system of letting out by contract the labor of convicts in our prisons and reformatory institutions;

XIII. To secure for both sexes equal pay for equal work;

XIV. The reduction of the hours of labor to eight per day, so that the laborers may have more time for social enjoyment and intellectual improvement, and be enabled to reap the advantages conferred by labor-saving machinery which their brains have created;

XV. To prevail upon governments to establish a purely national circulating medium issued directly to the people, without the intervention of any system of banking corporations, which money shall be a legal tender in payment of all debts, public and private.

In the autumn of 1881 the first local assembly of the Knights of Labor organized in Canada was "covered with the shield," in the basement of the then unfinished Canada Life Assurance building, in the city of Hamilton, and the organization of others followed in rapid succession until, when there were some twenty-five locals, a district assembly was formed, also the first in Canada. The city of Montreal followed the example of its western sister in a short time after in the matter of organization of local assemblies, but it was not until the 27th of August, 1882, that the first local assembly was organized in Toronto, Morse (Telegraphers') Assembly No. 2163. In about five weeks afterwards the factory boot and shoe operatives of the city joined the ranks as a trade local assembly, No. 2211, having meanwhile dissolved their union, which was local in its character. The first mixed assembly in the same city, composed of various callings, was organized in the early spring of 1883. These were the only assemblies in existence in Toronto when the general strike of the telegraph operators began on July 19th, 1883, but the comparative paucity of their numbers did not prevent them giving evidence of the sincerity of their resolves during the continuance of that unsuccessful struggle. There is no doubt that the defeat of the telegraphers at that time temporarily checked the growth of the order of the Knights of Labor not only in Canada but in the United States as well. But it was only temporarily, for, with the possible exception of the telegraphers, all those who were of the organization worked on undauntedly in furtherance of the main objects for which they were banded together, and the wide-spread character and powerful influence of the order at the present time in both countries bear testimony to the success of their efforts. And the result of this energy and perseverance went beyond the lines of their own organization, for the international and other trade unions were apparently smitten with sudden enthusiasm, and they also began to grow quickly apace both in membership and in branches.

That the tendency of the principles and methods of the Knights of Labor is in the direction of intellectual development, peaceful and lawful agitation, and an intelligent and united use of the ballot as a remedy for many of the grievances of which wage-earners now complain, few, if any, will deny. That arbitration will ultimately remedy the necessity for strikes, and that co-operation, productive as well as distributive, will in course of time take the place of the present wage-system, are views firmly held by the ablest minds of this organization, and Time alone can develop the correctness of their premises.

At present labor organizations—either trades unions or assemblies of Knights of Labor, and in most instances both one and the other—are to be found, more or less prosperous, in St. Johns, N.B.; Halifax, N.S.; Quebec city, Montreal, St. Henri, Point St. Charles and Portland Mines, Q.; in Winnipeg, Regina and Calgary; in Victoria, New Westminster, and Nanaimo, B. C.; and in Toronto, Hamilton, Ottawa, Kingston, London, St. Thomas, Brantford, Guelph, St. Catharines, Belleville, Stratford, Thorold, Merritton, Windsor, Port Huron, Amherstburg, Seaforth, Brampton, Georgetown, Owen Sound, Carleton Place, Perth, Peterborough, Lindsay, Uxbridge, Port Perry, Port Hope, Cornwall, Midland, Bracebridge, Carleton Junction, Parkdale, Port Dalhousie, Ingersoll, Chatham, Windsor, Woodstock, Dundas, Niagara Falls, Port Colborne, Galt, Clinton, Petrolia, Brockton, Gananoque, and Cobourg, in Ontario.

Independently of the order of the Knights of Labor, which is governed in Ontario by four district assemblies, and in the province of Quebec by one district assembly, the international trades' unions which, numerically and otherwise, exercise the most influence in Canada, are the typographical, the bricklayers', the iron-moulders', the cigar makers',

the American brotherhood of carpenters, and the amalgamated society of carpenters and joiners of Great Britain.

That labor organizations are gradually, though none the less certainly, asserting themselves in Canada as a political factor, as well as in other respects, needs no mention; yet it may not be out of place to say that, being here, a more careful as well as a more impartial consideration of their aims and methods by those who thoughtlessly condemn their existence would place these organizations in a better light than generally prevails at the present time.

Labor Strikes.—As an index of the influences workingmen had to contend against even in the early days of trades unions in Canada, as well as to-day, it may not be uninteresting to note that in 1851 the journeyman printers of the city of Quebec went on strike for some cause—presumably a rise of wages. The first council of the Catholic hierarchy of Canada was being held in that old-time city just then, and so adroitly was the case represented by the employers, as to the dangerous character of trades unions, that the subject was brought under the notice of the council of Bishops, and there is good reason to believe that, were it not for the eloquence and influence of that liberal-minded friend of the toilers, the present venerable Archbishop Lynch, of Toronto, who, although not then a Bishop, was present as a theologian, an edict of condemnation would then and there have been secured against the offending printers.

Not until the year 1872, however, did labor organizations in Canada attract much more than local notice. In that year the various trade unions existing in the city of Toronto determined on an agitation for a nine-hour working day, and action at once followed the determination. The typographical union led the van in the effort, in which it was but partially successful. It gained the various book and job offices of any account, but was not so fortunate as to some of the leading daily newspaper offices. As an offset to the movement on the part of the workingmen, the employers of the same city formed a counter organization to defeat the aims of the workers, one of the results of which was that several printers were placed under arrest, under an old, though unrepealed, British law embodied in the Canadian code, charged with conspiracy. Pending the trial of the men arrested, the Federal Parliament being at the time in session, active steps were taken by the labor organizations throughout the country to secure the legalization of trade unions. In this they were successful, and although the measure did not apply in the case of the printers mentioned as under arrest, yet the dropping of the case against them by the Crown prosecutor shortly after its passage in the House of Commons is presumptive evidence that their arrest was, to say the least of it, unpopular. At one time or another since then several trades have secured the working hours then and since contended for by the printers, and some work only eight hours.

The failure in the prosecution referred to, as well as the legal recognition involved in the Trades' Unions Act of 1872, lent new vigor to trade organizations in Ontario in a particular manner, for the year 1883 found the Trades' Assembly of Toronto doing hard work in the cause, while its much younger sister city of Ottawa had its Trades' Council. From the moment the erection of the Federal Parliament buildings was commenced in the latter city in 1857-8, building trades' organizations had an existence of a more or less successful character there, and prominent among their aids in the labor cause was the Ottawa typographical union, founded in 1866. In 1873 this body underwent the ordeal of a lengthy strike against an attempt at a reduction of wages on the part of the then contractor for the printing of Parliament. The strike was stubbornly contested on both sides, and continued for many weeks. The employer, failing to secure enough non-union men in Canada, had recourse to direct importation of compositors from Great Britain and France, both French and English printers being necessary to the proper performance of that work. But large numbers of the new arrivals, on learning the exact condition of affairs, joined the strikers, who were being loyally sustained by the local trade unions as well as by all connected with the international typographical union, and this so

crippled the contractor that he ultimately lost the contract through inability to perform the work in a satisfactory manner.

Owing to this strike primarily, as well as to other latent causes, the trades' council directed its attention to the inauguration of a new phase of action on the part of organized labor in Canada. This was in an effort to secure direct representation of organized labor in Parliament, and the opportunity was afforded in the same year through a vacancy having occurred in the representation of Ottawa in the provincial Legislature. The trades' council chose the president of that body as its nominee for the suffrages of the electorate, and this was the more easily accomplished owing to the fact that the property qualification clause governing candidature had been repealed at the 1869 session of the same Legislature, and which was in the following words :

> From and after the passing of this Act no qualification in real estate shall be required of any candidate for a seat in the Legislative Assembly of Ontario, any statute or law to the contrary notwithstanding, and every such last-mentioned statute and law is hereby repealed.

This bold manœuvre on the part of mere hewers of wood and drawers of water at first provoked ridicule, but as the canvass progressed and the sincerity of the originators of the movement became unquestionable, the ridicule began to turn into consternation on the part of those who, until then, looked upon the law-making power as their own prerogative. But despite both the one and the other, the ultimate result was the triumphant election of the labor candidate on polling day. This result was as much a surprise to the labor party itself as it was astounding to the ordinary political parties, for the running of a labor candidate on the occasion was not with the expectation of success, but was rather for the purpose of feeling the way for a more determined effort at the general elections of the following year. When that occasion was reached in 1875, the labor party was again triumphant, despite the most strenuous efforts of both the old political parties, each of which had a particularly strong candidate in the field. Subsequent to this election, owing to the general trade depression throughout Canada, and the fact that every public work in Ottawa had reached completion, a general exodus of mechanics and laboring men took place, and when the time for another general election came in its rotation—viz., 1879—there was no trades' council and but one trade union in Ottawa, and, as a consequence, the labor candidate suffered defeat in the elections of that year.

Although the Canadian Labor Union failed in its annual meeting of 1876, labor organizations of a local and international character in Canada had by no means ceased to exist or to battle for their rights or those of their membership. On December 29th of this year the locomotive engineers employed on the Grand Trunk railway of Canada entered upon a strike at a preconcerted moment all along the line, because of the company refusing or neglecting to consider grievances complained of by these employés. Owing to the great inconvenience to the public caused thereby, this strike brought the question of labor troubles once again into prominent notice in Canada, and the Dominion Government, at the session of 1877, introduced a measure entitled "An Act to repeal certain laws making breaches of contract criminal, and to provide for the punishment of certain breaches of contract." This Act was assented to on April 28th, one of the provisions of which was to the effect that it was a punishable offence on the part of railway employés to strike while a mail or passenger train was on its way to the end of its journey within the Dominion.

Until 1885 any difficulties between employers and employed in Canada were mainly traceable to trade unions and the employers of their membership. During the year 1885 the missionaries of the order of the Knights of Labor in the Dominion had so aroused the working classes, or at least that very large proportion of them not already organized into trades' unions, to the advantages of the new creed that "an injury to one should become the concern of all," that an almost phenomenal rush into its ranks resulted in Ontario in particular. The employes of the Toronto Street Car Company were no exception, for in the fall of that year a large number of them, desirous of that education which could only be attained by combination, became members of the order and formed an assembly. This movement soon came to the knowledge of the president of the company, and he at once

issued a peremptory order that no employé would be allowed connection with any labor organization, and decreeing that those who so belonged must sever the connection within a few days, else be discharged from the service of the company. The men sent a deputation of three members of the order not in the employ of the company to interview the president, but he refused to alter his decision in the slightest degree. Apparently much against their inclination the employés, on the well considered advice of their friends, obeyed the order of the company, when the assembly lapsed, and they worked on through the winter of 1885-6 as before. As the spring advanced, however, and no amelioration of their grievances was realized or seemed likely to be, they again began to join the ranks of the Knights of Labor, and when some five hundred or more of them were so connected, they once more determined to publicly assert their right as citizens and free men to belong to any lawful organization which to them seemed advisable. They were met on the threshold by the old-standing order that this would not be allowed. During some weeks every effort was made to peaceably shake the president in his attitude of hostility to organization, and to that of the Knights of Labor in particular, but to no purpose. The employés held meeting after meeting after the midnight hour—which was rendered necessary because the last car each week night did not cease running until half-past eleven o'clock—and were clamorous to be permitted to cease working, but those upon whom devolved the direction and advising of such a movement objected time and again, in the hope that better counsel would sooner or later prevail with the company. Ultimately, all efforts having failed, a vote of the employés only was taken, and it was unanimously determined that a strike take place. The strike did take place as determined on, and was prosecuted with vigor for several months, during part of which time the only occupants of the various cars traversing the city were a policeman and a non-society driver, on many streets the cars ceasing running altogether, while for some days not a car was to be seen on any street. During these days the sympathy of the general public was evinced in no unmistakeable manner on behalf of the strikers, and in some instances the exertions of the city police were necessary in protecting the cars from the not very friendly attentions of some of the more demonstrative. Any turbulent acts were, however, in contravention of the positive order of the executive of the assembly of which the strikers were members, and there is no evidence to show that this order was ignored by any of the men themselves. Their tactics were the very reverse; they at once began running free 'busses, trusting to voluntary fares paid by those who availed themselves of this means of transport. This movement, while being a good one, involved a very great outlay of money for horses and vehicles, stabling, feed, wear and tear, etc., besides provision had to be made for the financial assistance of the strikers. Yet so liberal was the public patronage that had those immediately interested but the requisite confidence in themselves and in their friends, there is no just reason to doubt that, with fair business management and perseverance, the scheme of a successful 'bus company on that occasion, in opposition to the street car company, was among the possibilities. But the want of this confidence led to the failure of the scheme, as well as to the defeat of those who struck, after a struggle extending over three months, involving an expenditure, independent of loss of time more or less on the part of the men, of some $14,000, and to the street railway company of a loss of many times that sum, doubtless.

Legislation.—It is worthy of note that from Confederation down to 1873 only one measure of any special importance to workingmen—the one repealing the property qualification clause of the election law—found its way upon the statutes of Ontario; yet, whether due to the successful political movement of the workingmen of Ottawa or not, the fact remains that from 1873 to 1879 the following important measures, having especial interest for those who work for wages, were enacted by the Legislature of the Province, viz.:

1. The Trades' Arbitration Act, 1873, which, while aiming at the establishment of a principle, is practically worthless, inasmuch as it contains a proviso that under it there

shall be no authority "to establish a rate of wages or price of labor or workmanship at which the workmen shall in future be paid."

2. An Act to establish Liens in favor of Mechanics, etc., 1873—rendered comparatively useless because of the proviso "unless there is an express agreement to the contrary."

3. An Act to amend the law relating to the attachment of debts as respects wages and salaries of mechanics and others, 1874, and which provides that "no debt due or accruing to a mechanic, workman, laborer, servant, clerk or employé, for or in respect of his wages or salary, shall . . be liable to seizure or attachment . . unless such debt shall exceed the sum of $25, and then only to the extent of such excess."

4. An Act to extend the elective franchise to "every person deriving an income from some trade, calling, office or profession, of not less than $400 annually, and is assessed for such income."

5. An Act to amend the Mechanics' Lien Acts of 1873-74.

6. An Act to provide for voting by ballot at municipal elections.

7. An Act to amend the Mechanics' Lien Act, 1878; and many others of more or less importance indirectly to the same class.

From 1868 to 1876, owing mainly to the agitation and efforts more or less spasmodic of organized labor, the Dominion Parliament enacted the following laws:

1. In 1872, an act respecting trades' unions, the tenor of which was that trades' unions shall not, by reason merely that they are in restraint of trade, be deemed to be unlawful, so as to render any members of such trade union liable to criminal prosecution for conspiracy or otherwise. This measure was not retroactive; it was simply a transcript of the English Act, and contained many objectionable features, tending to mar the main advantages sought to be conferred by the Act itself.

2. In 1872, an act to amend the criminal law relating to violence, threats and molestation. This measure was intended to remedy some of the defects complained of by labor organizations as militating against the trades' unions act of the same session. Under this amendment of the criminal law respecting the offences mentioned, which previous to its passage were criminal offences, the penalty after conviction was imprisonment, with or without hard labor, for a period of three months in the common jail.

3. In 1875, an act to amend the provisions of an act to amend the criminal law relating to violence, threats and molestations. This act changed the penalty for certain offences to imprisonment for a term not exceeding three months.

4. In 1876, an act to amend the criminal law relating to violence, threats, and molestations, which once again changed the penalty for offences under its provisions to a fine not exceeding $100, or imprisonment for a term not exceeding three months.

5. In 1877, an act to repeal certain laws making breaches of contract criminal, and to provide for the punishment of certain breaches of contract. As already mentioned, this measure owed its origin mainly to the strike of the locomotive engineers on the Grand Trunk railway in the previous month of December. At the same time it determined that in all cases breaches of contract on the part of workingmen should be actionable as offences at common law only, and punishable only as that law provided. Hon. Edward Blake, a member of the government, in speaking in support of the bill, very clearly stated its aim when he said: "It was a bad law which exempted a rich man, but said to the poor man—'It is a crime, and you shall go to jail.' It was an added injury to say that the breach of a civil contract . . was a crime."

Anterior to 1883 and subsequent to 1879, when the representative of the Ottawa trades' organization failed of re-election, the provincial legislature—or rather the Government of Ontario—had not entirely lost sight of the demands and necessities of wage-earners, for in 1881 was enacted an act to make provision for the safety of railway

employés and the public; and in 1882, an act to establish a Bureau of Industries; an act to provide for the establishment of free libraries; and an act to make further provision respecting the liens of mechanics and laborers.

It may truthfully be said, indeed, that each session of the Legislature of Ontario, of late years, has placed one or more measures of special interest to wage-earners upon the statute books of the province. Thus, in 1884, it still further amended the several lien acts of previous sessions in deference to the representations of the Toronto Trades and Labor Council. In the same year it also passed an act for the protection of persons employed in factories; while in the session of 1885 was enacted a law respecting wages, the main object and intent of which is the priority payment of three months' wages to employes in cases of assignment, the winding up of estates and of execution debtors.

At its session of 1886 the Ontario Legislature passed a measure entitled an act to secure compensation to workmen for injuries in certain cases, as also an act repealing section 8 of chapter 133, revised statutes of Ontario, and substituting therefor the following:

Any agreement or bargain, verbal or written, express or implied, which may hereafter be made between any person and any other person not a resident of Canada, for the performance of labor or service, or having reference to the performance of labor or service by such other person in the Province of Ontario, and made as aforesaid previous to the migration or coming into Canada of such other person whose labor or service is contracted for, shall be void and of no effect as against the person only so migrating or coming.

Of all the questions agitated by labor organizations in Canada, more especially in Ontario ever since 1872, those of factory inspection and immigration encouragement and the expenditure consequent thereon have received the most attention. Owing to this agitation the Dominion Government in 1881 appointed a commission to make "inquiry into the working of mills and factories (in Canada) and the labor employed therein." In the performance of the duties assigned it, this commission reported upon 465 factories visited, in which were employed:

Children under ten years of age, males	104
Children under ten years of age, females	69
Children ten to fourteen years, males	1,263
Children ten to fourteen years, females	823
Adult males	26,308
Adult females	324
Unclassified	1,838

The conclusions of the commission in almost every particular bore out the contentions of organized labor in favor of a Dominion factory law. This was so in an especial manner where the commission reports that:

The employment of children and young persons in mills and factories is extensive and largely on the increase. . . As to obtaining with accuracy the ages of the children employed, we found some difficulty inasmuch as the employer has no record thereof, having no interest or obligation in so doing. . . We are sorry to report that in very many instances the children, having no education whatever, could not tell their ages; this applies more particularly to those from twelve years downwards—some being found as young as eight and nine years. . . It must be borne in mind that the children invariably work as many hours as adults, and, if not compelled, are requested to work overtime. . . The appearance and condition of the children in the after part of the day, such as may be witnessed in the months of July and August, was anything but inviting or desirable. They have to be in the mill or factory at 6.30 a.m., necessitating their being up at from 5.30 to 6 o'clock for their morning meal, some having to walk a distance of half a mile or more to their work. This undeniably is too heavy a strain on children of tender years, and is utterly condemned by all except those who are being directly benefited by such labor.*

The commissioners also say that

Female labor is very extensively employed, not only in mills and factories, but also in private houses and what may be described as workshops which are very difficult to find, sometimes in the attic of a four-storey building, at others in a low, damp basement where artificial light has to be used during the entire day

This and similar evidence throughout this report on other phases of operatives' life in factories and mills, as well as that begotten of personal knowledge and experience in

* Report of the commissioners to the Minister of Finance, January 18th, 1882.

many cases, spurred the labor bodies to greater and more persistent effort to secure the desired legislation, but, in so far as respects the Dominion parliament, without success.

The Ontario Legislature dealt with the subject in the session of 1884 by the passing of a measure entitled "The Ontario Factories' Act," which contained a clause rendering it inoperative until so declared by proclamation of the lieutenant-governor in council. Owing, however, to the desire of the Government to procure with the federal authorities a settlement of the question of jurisdiction, it was not until the close of 1886 that the proclamation was issued.

Labor Representation.—At the provincial general elections of 1882 the labor organizations of Toronto essayed the task of electing a representative in the constituency of West Toronto, but failed of success. Hamilton labor bodies were no more successful in a like effort on that occasion. Nothing daunted, however, the organized labor element in both these cities renewed the movement at the general elections in 1886, but were again fated to disappointment. Not so, however, in the county of Lincoln,—the first county in Canada in which organized labor figured so prominently—for there a direct labor representative was nominated and elected to a seat in the provincial Legislature. That these contests, despite the defeats of the past, will be renewed as opportunity arises until success is achieved, is a fixed determination of those most immediately interested.

STATISTICS OF

VALUES, RENT AND WAGES.

VALUES—FARM LAND.

TABLE No. I.—Showing by County Municipalities and groups of Counties the value of Farm Land in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value per acre.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.	
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.
	$	$ c.	$	$ c.	$	$ c.
Essex	14,683,063	34 11	14,672,393	34 32	14,927,957	34 96
Kent	24,000,254	42 25	23,885,851	42 18	24,092,379	42 94
Elgin	19,160,401	43 63	18,656,202	42 37	18,985,698	43 36
Norfolk	12,196,960	30 61	11,873,686	29 92	12,291,332	31 15
Haldimand	10,021,290	35 67	9,400,729	33 69	9,713,382	34 63
Welland	9,008,671	39 50	8,734,633	38 81	8,962,803	39 74
Totals	89,070,639	37 98	87,223,494	37 35	88,973,551	38 24
Lambton	20,279,853	30 75	19,379,491	29 29	20,645,427	31 79
Huron	32,959,302	41 28	32,229,201	40 37	32,436,003	40 75
Bruce	23,056,391	28 20	21,739,941	26 32	23,378,471	28 54
Totals	76,295,546	33 53	73,348,633	32 09	76,459,901	33 77
Grey	23,265,073	21 88	23,238,823	21 61	23,564,220	22 08
Simcoe	26,232,430	27 57	25,629,104	26 66	25,903,290	27 18
Totals	49,497,503	24 57	48,867,927	24 00	49,467,510	24 48
Middlesex	38,381,450	50 58	37,871,309	49 97	38,677,440	51 08
Oxford	24,405,541	51 71	24,581,262	52 12	24,471,952	52 03
Brant	11,117,885	51 54	10,731,407	49 72	10,928,619	50 62
Perth	23,172,777	44 75	22,564,292	43 48	23,057,844	44 52
Wellington	22,352,499	35 63	22,122,629	35 29	22,271,647	35 58
Waterloo	15,416,728	50 26	14,690,897	47 99	15,064,353	49 27
Dufferin	8,772,242	24 68	8,347,180	23 34	8,757,289	24 64
Totals	143,619,122	44 14	140,908,976	43 29	143,229,144	44 09
Lincoln	9,187,563	48 21	8,771,414	45 95	8,759,742	46 11
Wentworth	14,060,340	51 68	13,295,322	48 47	13,633,356	49 89
Halton	9,668,619	43 39	9,186,394	40 88	9,288,504	41 51
Peel	13,333,878	46 25	12,806,809	44 47	13,092,405	45 43
York	29,449,409	54 60	30,093,101	55 57	29,617,694	54 92
Ontario	21,192,926	42 33	20,913,402	42 14	21,118,204	42 46
Durham	17,282,026	46 65	16,547,459	45 15	16,678,089	45 30
Northumberland	16,705,972	38 63	16,007,905	36 89	16,103,477	37 22
Prince Edward	9,864,273	42 38	9,525,072	41 06	9,566,639	41 40
Totals	140,745,006	46 15	137,146,878	44 99	137,858,110	45 29
Lennox and Addington	11,011,318	27 73	10,163,763	25 15	10,753,569	27 04
Frontenac	9,223,770	13 83	9,038,356	13 53	9,068,176	14 03
Leeds and Grenville	17,823,642	24 14	16,542,491	22 12	17,229,963	23 12
Dundas	8,525,531	35 91	8,077,431	34 05	8,183,485	34 59
Stormont	6,237,364	25 14	5,736,642	22 92	5,890,392	23 66
Glengarry	7,272,976	25 17	6,399,695	22 28	6,640,477	22 92
Prescott	6,908,598	24 37	5,939,092	20 74	5,975,688	20 96
Russell	4,646,658	18 56	4,814,438	19 17	4,512,345	18 08
Carleton	15,507,971	27 52	14,510,731	25 28	14,287,120	25 46
Renfrew	6,601,900	7 67	5.701,860	6 65	5,793,609	7 04
Lanark	8,036,209	12 17	7,321,155	11 03	7,257,616	11 15
Totals	101,795,937	19 59	94,245,654	18 04	95,592,440	18 62
Victoria	12,464,595	22 11	12,582,876	22 27	13,024,062	23 15
Peterborough	11,304,906	21 34	10,840,223	20 56	10,999,056	20 98
Haliburton	951,037	1 70	775,852	1 44	706,850	1 32
Hastings	17,792,385	18 87	16,224,037	17 49	16,668,515	18 41
Totals	42,512,923	16 37	40,422,988	15 80	41,398,483	16 39
Muskoka	2,063,091	4 05	2,032,024	3 99	2,012,347	4 18
Parry Sound	1,050,259	4 24	940,309	3 78	950,483	4 19
Algoma	1,359,802	5 03	1,285,141	4 72	1,467,248	5 09
Totals	4,473,152	4 35	4,257,474	4 13	4,430,078	4 45
The Province	648,009,828	29 78	626,422,024	28 77	637,409,217	29 56

VALUES—FARM BUILDINGS.

TABLE II.—Showing by County Municipalities and groups of Counties the value of Farm Buildings in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the yearly average per acre.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.	
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.
	$	$ c.	$	$ c.	$	$ c.
Essex	3,407,642	7 92	3,624,666	8 47	3,185,959	7 46
Kent	5,367,142	9 45	5,497,543	9 71	4,837,324	8 62
Elgin	4,874,113	11 10	4,826,997	13 96	4,559,975	10 41
Norfolk	4,069,086	10 21	3,968,167	10 00	3,849,954	9 76
Haldimand	3,374,234	12 01	3,247,765	11 63	3,129,768	11 16
Welland	3,156,526	13 84	3,230,273	14 35	2,955,832	13 11
Totals	24,248,743	10 34	24,395,411	10 45	22,518,812	9 68
Lambton	4,379,614	6 64	4,132,852	6 25	3,837,789	5 91
Huron	8,155,112	10 21	8,298,076	10 39	7,502,403	9 43
Bruce	5,537,174	6 77	5,631,601	6 82	5,063,599	6 18
Totals	18,071,900	7 94	18,062,529	7 90	16,403,791	7 24
Grey	6,663,354	6 27	6,884,299	6 40	6,012,515	5 63
Simcoe	6,559,754	6 89	6,770,027	7 04	6,124,448	6 43
Totals	13,223,108	6 56	13,654,326	6 70	12,136,963	6 01
Middlesex	10,072,194	13 27	9,761,498	12 88	9,144,026	12 08
Oxford	7,141,216	15 13	6,978,391	14 79	6,598,186	14 03
Brant	3,679,491	17 06	3,546,474	16 43	3,446,776	15 97
Perth	6,247,895	12 06	6,330,286	12 20	5,828,979	11 25
Wellington	6,815,234	10 86	6,979,567	11 13	6,247,730	9 98
Waterloo	4,919,434	16 04	4,920,807	16 07	4,630,221	15 15
Dufferin	2,130,470	6 00	2,073,776	5 80	1,942,435	5 47
Totals	41,005,934	12 60	40,590,799	12 47	37,838,353	11 65
Lincoln	3,249,080	17 00	3,244,443	16 99	3,090,076	16 27
Wentworth	4,754,027	17 47	4,726,450	17 23	4,450,900	16 29
Halton	3,473,762	15 59	3,338,872	14 86	3,069,250	13 71
Peel	4,201,677	14 57	4,292,384	14 90	3,861,365	13 40
York	8,547,045	15 84	8,612,751	15 91	7,888,371	14 63
Ontario	5,884,432	11 75	5,841,178	11 77	5,388,989	10 84
Durham	4,509,465	12 17	4,723,438	12 89	4,279,552	11 62
Northumberland	5,363,910	12 40	5,153,651	11 87	4,567,338	10 56
Prince Edward	3,120,370	13 41	3,390,062	14 61	3,007,775	13 02
Totals	43,094,768	14 13	43,323,229	14 21	39,603,616	13 01
Lennox and Addington	3,357,640	8 46	3,110,069	7 70	2,889,888	7 27
Frontenac	2,953,618	4 43	2,772,123	4 15	2,563,724	3 97
Leeds and Grenville	6,091,028	8 25	5,751,511	7 69	5,312,735	7 13
Dundas	2,558,959	10 78	2,433,584	10 26	2,210,342	9 34
Stormont	2,041,749	8 23	1,918,686	7 67	1,810,671	7 28
Glengarry	2,271,389	7 86	2,137,276	7 44	1,957,575	6 76
Prescott	2,023,897	7 14	1,818,087	6 35	1,563,585	5 48
Russell	1,077,667	4 31	1,143,842	4 55	952,479	3 82
Carleton	4,362,342	7 74	4,082,643	7 11	3,753,841	6 69
Renfrew	2,279,118	2 65	2,191,451	2 56	2,005,632	2 43
Lanark	2,821,186	4 27	2,793,234	4 21	2,441,092	3 75
Totals	31,838,593	6 13	30,152,506	5 77	27,461,564	5 35
Victoria	3,047,703	5 41	3,142,450	5 56	2,783,725	4 95
Peterborough	2,896,092	5 47	3,007,509	5 70	2,626,233	5 01
Haliburton	261,995	0 47	203,150	0 38	198,785	0 37
Hastings	4,973,830	5 27	4,858,251	5 24	4,479,300	4 95
Totals	11,179,620	4 31	11,211,360	4 38	10,088,043	3 99
Muskoka	562,033	1 10	578,862	1 14	493,603	1 02
Parry Sound	213,693	0 86	219,265	0 88	230,864	1 02
Algoma	309,820	1 15	289,618	1 06	295,449	1 02
Totals	1,085,546	1 06	1,087,745	1 06	1,019,916	1 02
The Province	183,748,212	8 44	182,477,905	8 38	167,071,058	7 75

VALUES—FARM IMPLEMENTS.

TABLE No. III.—Showing by County Municipalities and groups of Counties the value of Farm Implements in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value per acre.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.	
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.
	$	$ c.	$	$ c.	$	$ c.
Essex	1,018,731	2 37	1,035,294	2 42	910,005	2 13
Kent	1,482,389	2 61	1,529,537	2 70	1,367,779	2 44
Elgin	1,321,924	3 01	1,243,060	2 82	1,184,633	2 71
Norfolk	1,008,338	2 53	993,884	2 51	951,408	2 41
Haldimand	945,020	3 36	919,194	3 29	853,464	3 04
Welland	745,382	3 27	763,471	3 39	719,095	3 19
Totals	6,521,784	2 78	6,484,440	2 78	5,986,384	2 57
Lambton	1,210,073	1 84	1,145,100	1 73	1,116,889	1 72
Huron	2,332,115	2 92	2,229,290	2 79	2,137,821	2 69
Bruce	1,627,276	1 99	1,604,651	1 94	1,499,441	1 83
Totals	5,169,464	2 27	4,979,041	2 18	4,754,151	2 10
Grey	2 082,574	1 96	1,950,355	1 81	1,916,683	1 80
Simcoe	2,132,640	2 24	1,932,961	2 01	1,882,672	1 96
Totals	4,215,214	2 09	3,883,316	1 91	3,799,355	1 89
Middlesex	2,619,232	3 49	2,459,660	3 25	2,420,900	3 20
Oxford	1,638,201	3 47	1,653,124	3 50	1,553,655	3 30
Brant	923,163	4 28	849,332	3 94	827,283	3 83
Perth	1,743,279	3 37	1,721,698	3 32	1,667,098	3 22
Wellington	1,907,115	3 04	1,824,922	2 91	1,777,009	2 84
Waterloo	1,261,156	4 11	1,173,786	3 83	1,134,926	3 71
Dufferin	706,796	1 99	691,049	1 93	655,623	1 84
Totals	10,828,942	3 33	10,373,571	3 19	10,036,494	3 09
Lincoln	843,165	4 42	806,600	4 23	759,441	4 00
Wentworth	1,146,137	4 21	1,169,018	4 26	1,067,603	3 90
Halton	825,456	3 70	816,949	3 64	756,822	3 38
Peel	1,118,971	3 88	1,042,429	3 62	1,003,703	3 48
York	2,039,399	3 78	1,977,276	3 65	1,885,671	3 50
Ontario	1,482,946	2 96	1,476,943	2 98	1,363,405	2 74
Durham	1,179,198	3 18	1,200,795	3 28	1,102,053	2 99
Northumberland	1,263,015	2 92	1,309,600	3 02	1,159,482	2 68
Prince Edward	876,038	3 76	855,832	3 69	773,682	3 35
Totals	10,774,325	3 53	10,655,442	3 50	9,871,862	3 24
Lennox and Addington	958,379	2 41	822,750	2 04	776,171	1 95
Frontenac	910,419	1 36	818,798	1 22	750,022	1 16
Leeds and Grenville	1,570,922	2 13	1,419,175	1 90	1,364,217	1 83
Dundas	673,570	2 83	654,019	2 76	570,648	2 41
Stormont	583,697	2 35	543,448	2 17	483,670	1 94
Glengarry	710,788	2 46	680,425	2 37	578,651	2 00
Prescott	594,186	2 10	517,219	1 81	462,508	1 62
Russell	421,125	1 68	373,197	1 49	325,356	1 30
Carleton	1,350,391	2 40	1,269,057	2 21	1,157,873	2 06
Renfrew	848,712	0 98	780,366	0 91	656,699	0 80
Lanark	842,847	1 28	815,763	1 23	709,598	1 09
Totals	9,465,036	1 82	8,694,217	1 66	7,835,413	1 52
Victoria	918,528	1 63	883,137	1 56	827,599	1 47
Peterborough	758,082	1 43	748,699	1 42	678,361	1 29
Haliburton	62,774	0 11	64,605	0 12	57,144	0 11
Hastings	1,457,562	1 55	1,453,091	1 57	1,312,347	1 45
Totals	3,196,946	1 23	3,149,532	1 23	2,875,451	1 14
Muskoka	169,247	0 33	168,758	0 33	148,350	0 31
Parry Sound	69,870	0 28	77,177	0 31	80,969	0 35
Algoma	120,108	0 44	104,231	0 38	108,314	0 38
Totals	359,225	0 35	350,166	0 34	337,633	0 34
The Province	50,530,936	2 32	48,569,725	2 23	45,496,743	2 11

VALUES—FARM LIVE STOCK.

TABLE No. IV.—Showing by County Municipalities and groups of Counties the value of Farm Live Stock in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value per acre.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.	
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.
	$	$ c.	$	$ c.	$	$ c.
Essex	2,209,466	5 13	2,033,792	4 76	1,970,199	4 62
Kent	3,225,926	5 68	2,956,426	5 22	2,826,967	5 04
Elgin	2,704,451	6 16	2,519,724	5 72	2,583,378	5 90
Norfolk	1,915,557	4 81	1,864,197	4 70	1,777,509	4 51
Haldimand	1,955,289	6 96	1,828,265	6 55	1,708,046	6 09
Welland	1,414,281	6 20	1,358,243	6 03	1,295,797	5 74
Totals	13,424,970	5 73	12,560,647	5 38	12,161,896	5 23
Lambton	2,766,882	4 20	2,559,432	3 87	2,634,097	4 06
Huron	5,663,504	7 09	5,462,992	6 84	5,213,302	6 55
Bruce	4,037,143	4 94	3,833,571	4 64	3,647,363	4 46
Totals	12,467,529	5 48	11,855,995	5 19	11,494,762	5 08
Grey	4,791,578	4 50	4,832,130	4 50	4,626,340	4 33
Simcoe	4,200,034	4 41	3,978,208	4 14	3,865,499	4 06
Totals	8,991,612	4 46	8,810,338	4 32	8,491,839	4 20
Middlesex	6,312,359	8 32	5,797,541	7 65	5,849,326	7 73
Oxford	3,795,781	8 04	3,681,717	7 81	3,580,763	7 61
Brant	1,757,546	8 15	1,692,372	7 84	1,582,296	7 33
Perth	3,895,298	7 52	3,762,301	7 25	3,742,818	7 23
Wellington	4,341,773	6 92	4,135,775	6 60	4,057,900	6 48
Waterloo	2,291,004	7 47	2,169,524	7 09	2,159,515	7 06
Dufferin	1,514,969	4 26	1,502,720	4 20	1,448,401	4 08
Totals	23,908,730	7 35	22,741,950	6 99	22,421,019	6 90
Lincoln	1,510,496	7 93	1,369,559	7 17	1,328,009	6 99
Wentworth	2,229,630	8 20	1,997,193	7 28	2,003,977	7 33
Halton	1,724,904	7 74	1,623,644	7 22	1,570,940	7 02
Peel	2,229,160	7 73	2,092,655	7 27	2,006,470	6 96
York	4,190,090	7 77	4,040,028	7 46	3,897,206	7 22
Ontario	3,648,655	7 29	3,465,631	6 98	3,303,682	6 64
Durham	2,555,010	6 90	2,383,812	6 50	2,333,321	6 34
Northumberland	2,640,483	6 10	2,370,721	5 46	2,328,939	5 38
Prince Edward	1,489,710	6 40	1,221,646	5 26	1,218,133	5 27
Totals	22,218,138	7 29	20,564,889	6 75	19,990,677	6 57
Lennox and Addington	1,673,361	4 21	1,368,843	3 39	1,410,553	3 55
Frontenac	1,598,004	2 40	1,360,267	2 04	1,413,651	2 19
Leeds and Grenville	3,317,714	4 49	2,931,422	3 92	3,030,477	4 06
Dundas	1,338,603	5 64	1,189,984	5 01	1,173,225	4 96
Stormont	1,160,215	4 68	1,030,578	4 12	1,010,298	4 06
Glengarry	1,416,788	4 90	1,270,744	4 43	1,270,713	4 39
Prescott	1,073,118	3 78	1,092,018	3 81	963,323	3 38
Russell	722,658	2 89	756,384	3 01	679,731	2 72
Carleton	2,509,448	4 45	2,220,077	3 87	2,256,720	4 02
Renfrew	1,887,927	2 19	1,673,986	1 95	1,669,847	2 03
Lanark	1,914,985	2 90	1,774,901	2 68	1,738,287	2 67
Totals	18,612,821	3 58	16,669,204	3 19	16,616,825	3 24
Victoria	1,997,310	3 54	2,034,532	3 60	1,906,922	3 39
Peterborough	1,601,122	3 02	1,720,370	3 26	1,557,578	2 97
Haliburton	201,666	0 36	212,295	0 39	198,213	0 37
Hastings	2,691,399	2 85	2,513,997	2 71	2,526,312	2 79
Totals	6,491,497	2 50	6,481,194	2 54	6,189,025	2 45
Muskoka	537,747	1 06	481,932	0 94	442,887	0 92
Parry Sound	229,448	0 93	244,790	0 99	228,507	1 01
Algoma	326,443	1 21	279,147	1 03	288,350	1 00
Totals	1,093,638	1 06	1,003,869	0 97	959,744	0 96
The Province	107,208,935	4 93	100,690,086	4 62	98,325,787	4 56

VALUES—FARM PROPERTY.

TABLE No. V.—Showing by County Municipalities and groups of Counties, the value of Farm Property (Land, Buildings, Implements and Live Stock) in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average per acre.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.	
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.
	$	$ c.	$	$ c.	$	$ c.
Essex	21,318,902	49 53	21,366,145	49 98	20,994,120	49 17
Kent	34,075,711	59 99	33,869,357	59 81	33,124,449	59 04
Elgin	28,060,889	63 90	27,245,983	61 87	27,313,684	62 38
Norfolk	19,189,941	48 16	18,699,934	47 13	18,870,203	47 83
Haldimand	16,295,833	58 00	15,395,953	55 17	15,404,660	54 92
Welland	14,324,860	62 81	14,086,620	62 58	13,933,527	61 78
Totals	133,266,136	56 83	130,663,992	55 96	129,640,643	55 72
Lambton	28,636,422	43 43	27 216,875	41 14	28,234,202	43 48
Huron	49,110,033	61 50	48,219,559	60 39	47,289,529	59 42
Bruce	34,257,984	41 90	32,809,764	39 72	33,588,874	41 01
Totals	112,004,439	49 22	108,246,198	47 36	109,112,605	48 19
Grey	36,802,579	34 61	36,905,607	34 32	36,119,758	33 84
Simcoe	39,124,858	41 11	38,310,300	39 85	37,775,909	39 63
Totals	75,927,437	37 68	75,215,907	36 93	73,895,667	36 58
Middlesex	57,415,235	75 66	55,890,008	73 75	56,091,692	74 09
Oxford	36,980,739	78 35	36,894,494	78 22	36,204,556	76 97
Brant	17,478,085	81 03	16,819,585	77 93	16,784,974	77 75
Perth	35,059,249	67 70	34,378,577	66 25	34,296,739	66 22
Wellington	35,416,621	56 45	35,062,893	55 93	34,354,286	54 88
Waterloo	23,888,322	77 88	22,955,014	74 98	22,989,015	75 19
Dufferin	13,124,477	36 93	12,614,725	35 27	12,803,748	36 03
Totals	219,362,728	67 42	214,615,296	65 94	213,525,010	65 73
Lincoln	14,781,304	77 56	14,192,016	74 34	13,937,268	73 37
Wentworth	22,190,134	81 56	21,187,983	77 24	21,155,836	77 41
Halton	15,692,741	70 42	14,965,859	66 60	14,685,516	65 62
Peel	20,883,686	72 43	20,234,277	70 26	19,963,943	69 27
York	44,225,943	81 99	44,723,156	82 59	43,288,942	80 27
Ontario	32,208,959	64 33	31,697,154	63 87	31,174,280	62 68
Durham	25,525,699	68 90	24,855,504	67 82	24,393,015	66 25
Northumberland	25,973,380	60 05	24,841,877	57 24	24,159,236	55 84
Prince Edward	15,350,391	65 95	14,992,612	64 62	14,566,229	63 04
Totals	216,832,237	71 10	211,690,438	69 45	207,324,265	68 11
Lennox and Addington	17,000,698	42 81	15,465,425	38 28	15,830,181	39 81
Frontenac	14,685,811	22 02	13,989,544	20 94	13,795,573	21 35
Leeds and Grenville	28,803,306	39 01	26,644,599	35 63	26,937,392	36 14
Dundas	13,096,663	55 16	12,355,018	52 08	12,137,700	51 30
Stormont	10,023,025	40 40	9,229,354	36 88	9,195,031	36 94
Glengarry	11,671,941	40 39	10,488,140	36 52	10,447,416	36 07
Prescott	10,599,799	37 39	9,366,416	32 71	8,965,104	31 44
Russell	6,868,108	27 44	7,087,861	28 22	6,469,911	25 92
Carleton	23,730,152	42 11	22,082,508	38 47	21,455,554	38 23
Renfrew	11,617,657	13 49	10,347,663	12 07	10,125,787	12 30
Lanark	13,615,227	20 62	12,705,053	19 15	12,146,593	18 66
Totals	161,712,387	31 12	149,761,581	28 66	147,506,242	28 73
Victoria	18,428,136	32 69	18,642,995	32 99	18,542,308	32 96
Peterborough	16,560,202	31 26	16,316,801	30 94	15,861,228	30 25
Haliburton	1,477,472	2 64	1,255,902	2 33	1,160,992	2 17
Hastings	26,915,176	28 54	25,049,376	27 01	24,986,474	27 60
Totals	63,380,986	24 41	61,265,074	23 95	60,551,002	23 97
Muskoka	3,332,118	6 54	3,261,576	6 40	3,097,187	6 43
Parry Sound	1,563,270	6 31	1,481,541	5 96	1,490,823	6 57
Algoma	2,116,173	7 83	1,958,137	7 19	2,159,361	7 49
Totals	7,011,561	6 82	6,701,254	6 50	6,747,371	6 77
The Province	989,497,911	45 47	958,159,740	44 00	948,302,805	43 98

VALUES—RENT OF LEASED FARMS.

TABLE No. VI.—Showing by County Municipalities and groups of Counties the average area, value and rental of leased farms in Ontario as reported in the year 1886.

Counties.	Per cent. returned as leased.	Average area of leased farm.		Average value of leased farm.		Average yearly rental.	Rent per acre based on—	
		Acres occupied.	Acres cleared.	Land.	Buildings.		Acres occupied.	Acres cleared.
				$	$	$	$ c.	$ c.
Essex	11.8	102.7	58.0	3,946	777	170	1 66	2 94
Kent	16.4	115.1	77.5	5,916	1,310	309	2 69	3 99
Elgin	13.1	109.0	71.2	4,779	1,188	228	2 09	3 20
Norfolk	14.4	109.1	81.7	3,904	1,318	212	1 95	2 60
Haldimand	16.9	112.8	86.0	3,919	1,316	216	1 91	2 51
Welland	12.7	101.4	79.3	4,164	1,331	203	2 00	2 56
Group	14.5	109.6	76.5	4,587	1,233	233	2 13	3 05
Lambton	12.5	112.4	73.8	4,412	1,239	228	2 03	3 09
Huron	13.3	123.3	91.0	5,245	1,275	268	2 17	2 94
Bruce	14.6	117.1	82.5	4,141	1,076	218	1 86	2 64
Group	13.6	118.6	84.0	4,646	1,192	240	2 03	2 86
Grey	13.3	121.8	80.0	2,906	863	157	1 29	1 96
Simcoe	14.5	123.1	84.8	4,200	1,115	215	1 75	2 54
Group	13.8	122.4	82 0	3,449	969	181	1 48	2 21
Middlesex	13.7	108.8	77.1	5,469	1,302	262	2 41	3 40
Oxford	18.4	123.6	93.1	6,623	1,884	341	2 76	3 67
Brant	18.5	119.1	95.9	6,025	1,830	333	2 80	3 47
Perth	14.6	120.7	94.0	5,686	1,428	302	2 50	3 22
Wellington	19.1	120.5	90.1	4,454	1,304	231	1 92	2 57
Waterloo	12.1	126.0	102.3	6,287	2,015	299	2 37	2 92
Dufferin	23.0	143.4	94.0	3,947	890	205	1 43	2 18
Group	16.6	121.1	90.5	5,394	1,474	276	2 28	3 06
Lincoln	14.8	89.2	75.5	4,779	1,375	221	2 48	2 92
Wentworth	17.0	110.7	91.1	5,621	1,899	300	2 71	3 29
Halton	14.5	118.7	91.0	5,116	1,904	266	2 24	2 92
Peel	24.7	130.0	109.3	6,473	1,786	358	2 75	3 28
York	30.4	113.9	95.4	6,900	1,728	374	3 28	3 92
Ontario	25.1	122.4	95.9	5,834	1,616	349	2 85	3 64
Durham	24.6	116.7	96.1	6,224	1,543	372	3 19	3 87
Northumberland	21.7	125.2	98.2	4,899	1,450	276	2 21	2 81
Prince Edward	11.7	113.1	91.2	5,056	1,514	290	2 57	3 18
Group	22.1	116.8	95.2	5,954	1,655	331	2 83	3 47
Lennox & Add	16.3	132.0	104.4	5,135	1,974	294	2 23	2 82
Frontenac	10.1	122.8	82,5	3,346	1,225	183	1 49	2 22
Leeds & Grenville	9.5	127.6	83.4	3,652	1,233	190	1 49	2 28
Dundas	10.3	106.6	58.8	4,071	1,358	173	1 62	2 94
Stormont	18.1	116.4	75.6	3,351	1,107	166	1 43	2 20
Glengarry	10.9	111.8	70.6	3,308	1,081	170	1 52	2 40
Prescott	16.6	133.3	84.8	3,386	1,131	199	1 49	2 34
Russell	26.5	112.7	49.3	2,742	638	136	1 21	2 77
Carleton	9.1	122.5	81.0	3,903	1,358	206	1 68	2 54
Renfrew	8.1	182.7	84.4	2,329	990	155	0 85	1 83
Lanark	4.7	134.6	80.9	2,145	821	105	0 78	1 30
Group	10.6	127.1	77.8	3,446	1,186	182	1 43	2 34
Victoria	24.7	132.0	88.8	4,424	1,040	267	2 02	3 01
Peterborough	13.5	152.2	80.7	3,170	1,012	148	0 97	1 83
Haliburton	10.3	147.4	40.5	501	234	50	0 34	1 22
Hastings	12.2	129.5	84.8	4,930	1,439	265	2 04	3 12
Group	15.7	138.0	82.4	3,955	1,083	219	1 59	2 66
Muskoka	8.5	248.1	48.8	1,347	520	82	0 33	1 68
Parry Sound	4.4	146.7	38.7	950	400	76	0 52	1 97
Algoma	9.7	171.4	54.7	1,642	629	89	0 52	1 62
Group	7.9	208.9	49.0	1,376	535	83	0 40	1 70
The Province	15.3	121.1	85.7	4,808	1,340	255	2 10	2 97

VALUES—MARKET PRICES.

TABLE No. VII.—Showing the average prices of Agricultural Products at the leading markets of Ontario for July-December in 1886, and the average for the half-year, and for the Province.

Products.	Belleville.	Brantford.	Brockville.	Chatham.	Cobourg.	Guelph.	Kingston.	Lindsay.	London.	Ottawa.	St. Thomas.	Stratford.	Toronto.	The Province.	
														1886.	1885.
Fall Wheat, per bush:	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
July	72.5	74.3	87.5	71.3	....	75.0	76.5	72.1	70.5	75.8	70.0	72.5	76.3	73.6	84.9
August	72.5	75.2	86.5	72.2	...	75.3	75.0	71.0	70.5	80.0	73.8	71.8	75.9	73.9	82.3
September	72.5	74.0	80.6	72.5	....	75.8	70.0	72.0	70.5	78.8	73.8	73.3	76.7	73.7	79.4
October	72.5	71.3	79.2	69.7	....	73 0	71.7	69.8	68.9	73.8	69.8	71.5	75.5	72.1	81.1
November	72.5	70.8	73.3	70.0	74.2	73.5	70.5	71.3	69.9	70.0	69.5	73.0	76.3	72.4	81.7
December	....	75.0	71.9	74.3	75.5	75.3	72.0	73.7	73.6	74.2	75.1	75.4	80.4	75.7	79.7
Average	72.5	73.8	80.4	71.7	74.9	74.6	71.9	71.5	70.7	75.3	71.8	72.9	76.9	73.6	81.5
Spring Wheat, per bush.:															
July	72.5	74.5	87.5	71.1	....	71.5	78.2	71.9	64.5	78.8	70.0	60.0	76.1	71.8	84.8
August	72.5	75.2	87.5	72.4	....	72.4	75.0	72.5	64.5	80.0	73.8	60.0	76.0	71.8	81.7
September	72.5	74.8	80.6	72.5	....	75.3	70.0	75.0	65.0	78.1	73.8	64.9	76.6	71.9	79.1
October	72.5	71.3	78.3	69.7	....	73.0	72.0	72.7	66.4	76.5	69.8	71.5	75.7	71.8	80.8
November	72.5	70.3	72.5	70.0	74.2	73.5	71.8	73.5	67.0	77.5	69.5	71.9	76.7	72.0	81.3
December	....	74.4	71.9	74.3	75.5	75.3	71.7	74.8	72.4	78.8	75.1	71.6	80.7	75.4	77.2
Average	72.5	73.7	80.2	71.7	74.9	73.4	72.3	73.3	66.6	78.3	71.8	66.6	77.0	72.5	80.6
Barley, per bush.:															
July	60.0	67.7	55.0	49.2	....	52.5	52.5	.....	48.0	50.0	47.5	45.0	49.0	52.4	51.3
August	60.0	67.9	55.0	49.2	....	57.8	....		48.3	52.0	47.5	47.5	56.5	54.2	51.8
September	58.0	50.8	48.4	49.2	....	58.4	50.6	44.2	50.4	52.1	60.0	49.5	56.4	53.2	54.5
October	55.0	49.1	47.5	46.3	....	55.3	50.4	45.0	49.2	49.8	37.5	45.0	55.7	50.8	56.3
November	52.1	49.7	37.5	46.8	52.5	54.5	49.1	46.6	46.5	52.5	37.5	45.0	53.7	49.3	57.0
December	....	47.8	37.5	42.0	49.3	52.6	45.4	46.0	45.6	51.7	.....	45.0	51.8	47.6	59.0
Average	58.1	60.0	47.6	47.0	50.1	55.1	48.6	45.5	48.0	51.2	46.0	46.3	53.7	51.3	55.2
Oats, per bush.:															
July	37.5	29.5	32.9	29.5	....	34.3	31.8	37.6	33.1	34.1	29.5	31.6	38.2	33.8	33.0
August	37.5	31.3	33.6	25.0	....	36.0	33.0	36.5	34.8	34.5	31.9	34.3	38.0	35.3	32.0
September	36.7	29.8	32.9	25.0	....	35.9	30.4	29.6	31.1	34.0	31.0	29.5	35 8	33.0	31.7
October	33.0	28.4	31.0	25.4	....	30.0	26.4	25.6	28.9	29.2	27.6	26.0	33.3	29.6	30.4
November	33.0	28.7	29.0	25.5	32.7	29.0	25.9	25.5	29.6	29.8	26.0	26.6	33.7	30.0	31.1
December	....	30.5	29.0	26.5	33.0	29.0	25.4	27.0	30.3	30.4	27.2	27.8	32.0	29.7	31.1
Average	36.3	29.7	31.6	25.6	32.9	32.4	27.4	30.3	31.4	31.3	28.6	29.3	35.1	32.0	31.5
Rye, per bush.:															
July	51.5	52.3	60.0	....	....	52.5	52.8	50.0	49.5	.....	....	.....	60.0	53.7	58.8
August	51.5	52.2	60.0	....	...	52.1	...	50.0	50.4	.....	.....	.....	60.0	53.8	56.1
September	48.9	53.8	55.6	....	....	52.5	45.0	50.0	51.0	.....	.....	.....	60.0	53.5	55.2
October	44.2	52.6	57.5	....	....	53.5	45.0	50.0	51.3	.....	.....	.....	60.0	51.1	55.0
November	45.0	48.0	49.2	....	45.0	51.0	45.0	50.0	50.4	52.5	.....	.....	49.9	49.2	53.5
December	....	....	46.3	....	45.0	51.0	43.4	50.0	50.4	.....	.....	.....	49.2	48.8	53.2
Average	49.3	52.1	55.1	....	45.0	52.1	45.6	50.0	50.5	52.5	.....	.....	58.5	52.2	55.2
Pease, per bush.:															
July	57.5	51.1	62.5	51.0	....	51.0	62.5	55.6	52.5	53.8	50.0	52.5	55.4	54.0	61.5
August	57.5	51.3	62.5	51.0	...	51.0	57.0	50.0	52.5	.....	50.0	51.8	56.5	54.4	60.5
September	54.5	50.5	58.8	50.6	....	52.0	55.0	50.0	52.5	57.5	50.0	52.1	56.8	54.0	57.0
October	50.0	48.7	57.5	50.0	....	51.0	50.4	50.0	51.0	55.3	.....	48.5	55.3	52.1	56.2
November	50.0	47.7	50.0	50.0	52.5	49.0	49.8	47.0	49.7	52.4	45.0	48.0	52.2	50.3	56.4
December	....	48.3	50.6	50.0	50.0	49.0	49.6	47.0	50.6	54.8	47.8	48.1	52.4	50.6	56.7
Average	55.1	50.0	57.5	50.4	51.1	50.5	52.3	50.1	51.5	54.1	49.4	50.2	54.7	52.6	58.0

VALUES—MARKET PRICES.—*Continued.*

TABLE No. VII.—Showing the average prices of Agricultural Products etc.—*Continued.*

Products.	Belleville.	Brantford.	Brockville.	Chatham.	Cobourg.	Guelph.	Kingston.	Lindsay.	London.	Ottawa.	St. Thomas.	Stratford.	Toronto.	The Province.	
														1886.	1885.
Corn, per bush. (in ear):	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
October	35.0	25.5	....	20.8	....	....	26.8	....	27.9	37.9	....	....	.....	28.4	28.1
November	35.0	25.8	....	20.8	....	....	27.5	....	26.6	40.6	....	....	.....	28.0	28.1
December	....	26.0	....	19.8	....	....	27.3	....	26.5	33.8	....	....	.....	26.2	27.5
Average	35.0	25.7	....	20.4	....	....	27.1	....	27.0	37.0	....	....	.....	27.6	27.9
Buckwheat, per bush.:															
October	37.5	39.3	36.8	....	....	....	35.8	....	33.0	.....	....	....	.....	34.5	41.1
November	37.5	36.5	36.0	....	....	....	31.7	....	32.5	37.6	....	....	.....	34.2	39.1
December	....	.....	36.6	....	....	....	36.0	....	31.0	.....	....	....	....	32.0	37.4
Average	37.5	38.3	36.5	....	....	....	34.1	....	32.1	37.6	....	....	.....	33.7	39.2
Beans, per bush.:															
October	75.0	.....	90.0	75.0	....	....	.....	....	....	.....	....	....	.....	78.5	77.9
November	75.0	.....	91.7	77.5	....	....	112.5	....	....	93.5	....	....	.....	86.4	81.4
December	....	.....	95.0	77.5	....	....	.....	....	....	.....	....	....	.....	85.0	80.9
Average	75.0	.....	92.5	76.7	....	....	112.5	....	....	93.5	....	....	.....	83.7	80.0
Potatoes, per bush.:															
October	36.7	48.3	37.5	45.0	....	38.3	43.2	26.5	43.1	48.9	47.9	45.4	44.8	43.1	38.3
November	36.7	48.3	42.8	48.3	38.9	38.3	42.7	22.5	42.7	48.8	44.7	52.1	46.1	43.7	41.7
December	....	48.8	42.5	48.3	40.0	40.4	46.0	25.2	50.0	55.0	44.8	55.0	50.8	47.9	43.3
Average	36.7	48.5	41.1	47.1	39.5	39.0	44.0	24.9	45.3	49.9	45.5	50.8	47.3	44.9	41.1
Carrots, per bush.:															
October	....	.....	65.0	....	....	....	50.0	....	20.0	25.0	....	....	39.3	29.7	37.4
November	....	.....	65.0	....	....	....	53.3	....	20.0	25.0	32.5	....	33.3	29.7	31.6
December	....	.....	65.0	....	....	....	.....	....	20.0	26.7	32.5	....	31.3	29.2	32.2
Average	....	.....	65.0	....	....	....	52.0	....	20.0	25.1	32.5	....	33.5	29.6	32.5
Turnips, per bush.:															
October	....	.....	27.5	....	....	....	53.3	....	24.3	22.1	...	....	23.5	26.1	24.8
November	....	.....	27.5	....	....	....	46.7	....	22.5	21.4	....	....	24.2	24.3	23.0
December	....	....	27.5	....	....	....	.....	...	22.5	22.5	....	....	24.2	23.7	22.8
Average	....	.....	27.5	..	..	....	50.0	...	23.1	21.7	....	....	24.1	24.6	23.6
Wool, per lb.:															
July	19.0	19.0	18.0	21.5	....	20.5	18.3	18.0	19.0	18.2	19.0	17.0	.....	18.9	17.5
August	19.0	.....	18.0	21.5	....	20.8	18.0	19.0	19.0	16.0	19.4	17.0	.....	19.0	17.1
September	19.0	.....	18.0	20.5	....	21.0	18.1	19.0	19.0	16.8	19.5	....	.....	18.9	17.4
October	19.4	.....	18.0	19.0	....	21.0	19.3	20.5	19.0	20.8	....	....	.....	19.3	17.4
November	20.5	23.5	18.0	19.0	19.0	21.0	18.6	21.0	19.0	...	....	....	.....	19.4	17.4
December	....	20.3	18.0	19.0	19.0	21.0	19 1	21.0	19.0	19.7	....	17.0	.....	19·3	17.5
Average	19.2	20.6	18.0	20.0	19.0	20.9	18.6	19.8	19.0	18.2	19.1	17.0	.....	19.1	17.4
Hay, per ton:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
July	8.00	10.50	8.50	9.50	....	7.20	8.38	8.25	8.05	10.58	7.45	7.00	11.27	9.06	10.16
August	8.00	9.75	8.50	9.50	....	7.88	8.00	8.25	8.44	11.25	7.50	7.00	11.83	9.21	9.48
September	8.21	9.75	8.75	9.50	....	8.94	7.50	8.83	9.00	11.19	....	7.30	12.40	9.80	9.83
October	8.50	9.75	8.50	9.50	....	8.75	8.35	9.44	9.00	12.44	...	9.63	12.42	10.23	9.56
November	8.00	9.83	8.92	9.50	8.50	8.63	8.17	8.88	9.00	11.69	8.50	9.63	12.49	10.09	10.07
December	....	9.50	9.50	9.50	8.50	8.50	8.33	8.50	9.00	11.83	8.50	9.75	11.83	9.93	9.96
Average	8.11	10.02	8.77	9.50	8.50	8.27	8.23	8.69	8.75	11.58	7.64	8.34	12.05	9.69	9.85

VALUES—FALL WHEAT.

TABLE No. VIII.—Showing by County Municipalities and groups of Counties the marketable value of Fall Wheat in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	524,163	16 31	558,080	19 87	587,685	17 85	91
Kent	1,023,662	16 10	1,247,396	20 89	1,121,672	18 15	89
Elgin	717,832	16 93	721,819	18 51	834,731	18 45	92
Norfolk	399,269	11 47	623,395	19 15	561,535	16 79	68
Haldimand	393,325	11 36	648,028	20 34	510,167	15 37	74
Welland	327,671	14 40	373,920	17 15	340,989	14 73	98
Totals	3,385,922	14 70	4,172,638	19 59	3,956,779	17 22	85
Lambton	476,278	14 76	660,601	22 98	593,706	17 55	84
Huron	1,170,487	16 85	1,244,651	21 03	1,388,902	19 19	88
Bruce	754,775	16 16	826,431	18 26	994,415	18 69	86
Totals	2,401,540	16 18	2,731,683	20 51	2,977,023	18 67	87
Grey	332,518	14 65	363,193	15 94	581,495	19 43	75
Simcoe	546,067	12 64	1,123,640	20 58	1,112,187	19 99	63
Totals	878,585	13 26	1,486,833	19 21	1,693,682	19 80	67
Middlesex	1,062,155	16 35	1,157,323	19 16	1,451,907	18 94	86
Oxford	560,556	15 93	663,667	19 92	720,564	18 21	87
Brant	369,555	12 25	521,364	17 22	570,332	17 65	69
Perth	792,511	16 59	909,230	22 41	928,680	19 64	84
Wellington	410,358	16 16	513,847	19 35	572,044	19 07	85
Waterloo	594,851	14 87	796,014	20 46	813,503	19 78	75
Dufferin	151,733	15 18	229,889	17 76	235,064	18 63	81
Totals	3,941,719	15 55	4,791,334	19 72	5,292,094	18 93	82
Lincoln	318,440	13 79	442,612	21 07	398,679	17 52	79
Wentworth	373,823	11 53	650,710	20 72	598,970	18 24	63
Halton	230,073	11 27	491,278	21 34	417,797	17 74	64
Peel	391,333	13 59	740,607	25 02	596,022	20 52	66
York	447,720	15 04	868,333	21 94	849,201	20 59	73
Ontario	78,731	15 77	202,949	20 46	251,833	20 99	75
Durham	50,547	17 08	50,261	19 04	66,396	19 74	87
Northumberland	170,250	18 56	192,321	19 83	199,695	20 35	91
Prince Edward	19,225	15 87	32,880	17 28	36,938	14 47	110
Totals	2,080,192	13 61	3,671,951	21 26	3,415,531	19 28	71
Lennox and Addington	23,770	14 84	31,770	13 85	36,953	16 65	89
Frontenac	12,960	14 35	39,470	17 22	41,282	17 87	80
Leeds and Grenville	53,337	15 33	83,798	16 53	109,460	17 36	88
Dundas	4,922	16 19	6,853	9 54	29,149	17 59	92
Stormont	4,593	14 72	6,284	12 77	15,959	17 12	86
Glengarry	2,426	11 28	6,743	16 06	13,358	15 51	73
Prescott	59	14 75	763	14 67	1,173	11 50	128
Russell	230	17 69	731	9 37	4,620	17 05	104
Carleton	1,848	13 69	8,409	11 71	29,873	14 24	96
Renfrew	3,542	12 88	3,596	13 37	24,521	17 45	74
Lanark	29,263	14 61	51,781	17 48	68,162	18 45	79
Totals	136,950	14 81	240,198	15 63	374,510	17 13	86
Victoria	162,657	17 01	150,392	19 51	181,324	18 35	93
Peterborough	183,782	19 14	146,081	16 15	204,903	19 81	97
Haliburton	839	11 34	311	9 13	1,153	14 06	81
Hastings	127,057	19 28	107,968	14 78	152,862	18 22	106
Totals	474,335	18 36	404,752	16 80	540,242	18 83	86
Muskoka	640	11 03	1,416	17 93	849	15 44	71
Parry Sound	44	14 67	1,304	16 30	741	16 84	87
Algoma	434	12 76	2,690	16 30	6,631	22 18	58
Totals	1,118	11 77	5,410	16 70	8,221	20 66	57
The Province	13,300,361	15 00	17,504,799	20 00	18,258,082	18 59	81

Note.—The marketable values of Wheat, Barley, Oats, Rye, Pease, Hay and Wool are computed from the average Market Prices for the Province (Table VII) for the six months July-December in each year. Corn, Buckwheat, Beans and the Roots are based on the average prices for the three months Oct.-Dec.

VALUES—SPRING WHEAT.

TABLE No. IX.—Showing by County Municipalities and groups of Counties the marketable value of Spring Wheat in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	18,334	10 51	32,051	11 84	25,419	13 46	78
Kent	44,901	12 99	70,658	12 54	37,362	13 61	95
Elgin	34,866	19 39	63,212	11 33	29,662	12 63	82
Norfolk	9,340	8 84	25,038	12 29	12,743	12 70	70
Haldimand	25,718	8 90	59,447	10 98	38,608	12 57	71
Welland	14,822	9 70	39,346	9 24	25,522	12 28	79
Totals	147,981	10 55	289,752	11 31	169,316	12 89	82
Lambton	92,855	10 06	182,329	11 78	105,591	13 00	77
Huron	192,062	8 84	275,053	6 63	298,321	11 91	74
Bruce	179,293	11 30	199,920	9 07	197,584	12 50	90
Totals	464,210	9 91	657,302	8 32	601,496	12 28	81
Grey	403,767	10 53	362,964	7 03	673,210	13 29	79
Simcoe	503,130	13 94	338,592	7 63	527,526	14 24	98
Totals	906,897	12 19	701,556	7 31	1,200,736	13 69	89
Middlesex	183,371	9 77	355,128	10 03	204,362	12 86	76
Oxford	137,259	9 96	213,254	9 39	187,013	14 24	70
Brant	12,877	8 61	26,451	7 69	20,470	11 80	73
Perth	125,214	8 57	153,782	5 55	234,861	13 23	65
Wellington	208,045	10 66	204,376	6 50	342,811	13 34	80
Waterloo	53,714	9 71	83,636	7 00	98,372	13 30	73
Dufferin	212,716	11 82	165,331	7 42	277,561	13 00	91
Totals	933,196	10 35	1,201,958	7 76	1,365,450	13 26	78
Lincoln	20,132	9 22	45,907	10 11	35,554	13 04	71
Wentworth	27,489	9 64	51,726	10 83	41,449	13 36	72
Halton	32,256	10 00	45,576	7 90	52,314	13 50	74
Peel	116,596	10 82	148,523	10 27	218,864	15 56	70
York	334,705	13 52	304,878	9 43	454,482	16 05	84
Ontario	708,429	15 35	467,293	8 72	799,051	16 03	96
Durham	391,870	12 43	411,882	8 44	684,293	15 72	79
Northumberland	274,279	10 90	284,879	7 83	435,145	13 53	81
Prince Edward	63,316	10 77	91,416	7 79	95,916	12 26	88
Totals	1,969,072	12 91	1,852,080	8 72	2,817,068	15 19	85
Lennox and Addington	65,607	11 06	85,923	9 79	101,450	13 98	79
Frontenac	93,817	11 39	132,797	12 09	131,998	14 54	78
Leeds and Grenville	185,718	12 67	226,710	15 82	218,355	15 50	82
Dundas	93,882	15 81	99,290	16 84	81,496	17 17	92
Stormont	72,441	13 48	75,762	16 72	72,057	16 57	81
Glengarry	120,901	13 54	132,572	15 15	116,452	14 79	92
Prescott	144,750	15 86	92,310	11 58	116,126	14 34	111
Russell	62,946	14 05	62,983	14 84	68,112	15 32	92
Carleton	258,405	12 22	325,258	14 15	347,967	15 09	81
Renfrew	298,458	12 09	347,671	13 25	400,184	15 82	76
Lanark	163,809	11 40	210,468	12 72	212,820	14 75	77
Totals	1,560,734	12 70	1,791,744	13 65	1,867,017	15 22	83
Victoria	335,876	12 12	284,605	7 83	517,234	14 26	85
Peterborough	308,580	12 25	206,522	6 56	349,714	12 94	95
Haliburton	12,658	11 92	12,722	9 81	14,300	10 89	109
Hastings	171,449	11 64	250,135	11 18	274,826	15 06	77
Totals	828,563	12 06	753,984	8 24	1,156,074	13 95	86
Muskoka	13,107	11 01	18,058	10 94	22,932	14 23	77
Parry Sound	13,690	11 39	26,638	14 77	28 816	15 51	73
Algoma	63,501	11 48	65,612	12 09	132,044	18 62	61
Totals	90,298	11 39	110,308	12 42	183,792	17 40	65
The Province	6,900,961	11 95	7,358,684	9 20	9,360,949	14 31	84

VALUES—BARLEY.

TABLE No. X.—Showing by County Municipalities and groups of Counties the marketable value of Barley in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	41,317	14 28	34,585	15 32	33,679	15 05	95
Kent	72,786	14 69	63,570	15 98	87,308	15 48	95
Elgin	61,287	15 14	57,538	16 24	70,080	15 86	95
Norfolk	69,875	12 03	67,683	16 06	93,430	15 61	77
Haldimand	177,008	12 34	192,866	15 89	195,721	12 93	95
Welland	38,421	10 97	59,503	13 90	56,845	13 54	81
Totals	460,694	12 96	475,745	15 64	537,063	14 28	91
Lambton	186,645	15 29	201,579	16 83	212,340	14 65	104
Huron	314,883	14 50	272,996	15 56	410,629	16 27	89
Bruce	269,093	13 62	226,336	15 48	285,255	15 61	87
Totals	770,621	14 36	700,911	15 88	908,224	15 66	92
Grey	316,193	12 51	290,547	13 44	358,134	14 72	85
Simcoe	414,015	13 52	291,990	14 63	419,603	15 57	93
Totals	730,208	14 41	582,537	14 01	777,737	15 17	89
Middlessx	175,453	14 93	139,558	15 26	228,484	15 34	97
Oxford	216,065	15 88	190,814	16 74	290,693	17 78	89
Brant	240,870	13 23	255,626	17 74	248,901	16 17	82
Perth	204,014	15 41	191,821	15 87	305,764	16 95	91
Wellington	477,965	14 42	422,639	15 52	535,071	16 20	89
Waterloo	214,663	14 57	204,470	17 55	264,645	17 68	82
Dufferin	178,530	13 69	151,051	15 77	154,106	14 50	94
Totals	1,707,560	14 51	1,555,979	16 29	2,027,664	16 45	88
Lincoln	35,913	11 39	50,399	15 67	64,379	15 14	75
Wentworth	161,127	12 51	176,703	17 69	191,131	16 55	76
Halton	169,461	12 15	154,849	17 26	196,661	16 12	75
Peel	437,076	12 99	502,354	18 49	509,317	16 47	79
York	882,733	15 26	781,848	17 02	872,669	16 76	91
Ontario	612,543	16 17	442,188	15 14	577,267	16 51	98
Durham	797,958	15 25	586,155	15 49	700,682	16 33	93
Northumberland	564,911	11 69	575,924	15 02	614,446	14 04	83
Prince Edward	351,345	10 11	439,469	12 05	481,939	11 87	85
Totals	4,013,067	13 62	3,709,889	15 64	4,208,491	15 40	88
Lennox and Addington	446,545	11 80	471,603	13 15	563,111	13 29	89
Frontenac	165,803	12 35	234,753	14 43	279,837	14 63	84
Leeds and Grenville	138,354	13 46	121,542	14 90	168,956	14 81	91
Dundas	78,226	15 29	91,569	15 95	136,244	17 91	85
Stormont	23,971	14 16	30,819	15 46	41,502	16 53	86
Glengarry	25,024	12 22	19,044	13 80	27,518	13 46	91
Prescott	46,435	17 19	23,183	11 45	29,673	14 18	121
Russell	16,677	12 40	17,236	13 25	17,575	14 08	88
Carleton	133,820	14 32	98,086	17 03	116,868	16 24	88
Renfrew	19,757	14 56	16,831	14 66	17,491	15 81	92
Lanark	38,426	13 91	43,704	17 11	38,683	16 28	85
Totals	1,133,038	12 89	1,168,370	14 22	1,437,458	14 51	89
Victoria	439,741	12 89	348,916	14 03	405,873	14 53	89
Peterborough	200,988	12 97	152,218	13 16	202,186	14 96	87
Haliburton	3,095	12 63	4,664	13 80	4,004	14 25	89
Hastings	522,317	13 10	399,502	14 25	598,970	14 32	91
Totals	1,166,141	12 99	905,300	13 97	1,211,033	14 49	90
Muskoka	7,097	10 62	7,412	11 32	6,717	12 17	87
Parry Sound	12,984	12 65	10,226	13 11	10,114	13 56	93
Algoma	8,389	11 80	10,171	15 18	8,535	14 47	82
Totals	28,470	11 84	27,809	13 21	25,366	13 44	88
The Province	10,009,799	13 60	9,126,540	15 27	11,133,036	15 29	89

VALUES—OATS.

TABLE No. XI.—Showing by County Municipalities and groups of Counties the marketable value of Oats in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	401,251	13 91	352,183	12 51	365,692	13 75	101
Kent	455,163	13 96	428,208	13 01	459,612	14 76	95
Elgin	412,214	13 56	379,991	12 05	437,049	14 13	96
Norfolk	253,055	10 45	312,618	11 81	328,913	12 83	81
Haldimand	227,839	10 73	252,702	11 63	258,980	12 41	86
Welland	187,876	10 95	176,388	10 24	212,511	11 76	93
Totals	1,937,398	12 54	1,902,090	12 03	2,062,757	13 46	93
Lambton	462,064	12 45	464,267	12 16	485,164	13 40	93
Huron	866,569	11 82	829,384	11 87	940,797	13 58	87
Bruce	648,403	10 99	643,231	11 64	669,950	12 57	87
Totals	1,977,036	11 67	1,936,882	11 86	2,095,911	13 20	88
Grey	919,073	10 55	788,073	10 34	936,389	12 17	87
Simcoe	827,050	12 16	610,172	10 44	728,003	12 74	95
Totals	1,746,123	11 25	1,398,245	10 39	1,664,392	12 41	91
Middlesex	864,097	12 57	809,841	11 89	942,203	14 22	88
Oxford	661,383	12 92	603,256	12 13	705,771	14 56	89
Brant	186,704	11 02	213,456	11 48	245,457	14 07	78
Perth	715,231	13 20	617,866	12 39	747,769	14 83	89
Wellington	827,971	11 84	762,566	11 71	832,154	13 49	88
Waterloo	383,627	11 22	415,802	12 34	454,134	14 08	80
Dufferin	340,869	11 69	311,373	11 93	316,304	12 43	94
Totals	3,979,882	12 27	3,734,160	12 00	4,243,792	14 05	87
Lincoln	163,135	10 02	207,581	11 81	221,214	12 85	78
Wentworth	313,016	11 26	334,234	12 67	392,367	14 30	79
Halton	186,781	10 29	217,220	12 40	235,282	13 47	76
Peel	295,316	10 88	351,654	12 58	362,850	13 91	78
York	817,392	13 09	720,090	12 02	857,561	14 89	88
Ontario	665,401	13 55	517,461	11 03	614,921	13 78	98
Durham	425,856	12 45	347,595	10 88	438,354	13 72	91
Northumberland	311,135	9 93	288,341	9 74	324,102	11 74	85
Prince Edward	150,064	9 69	115,047	8 52	137,935	10 23	95
Totals	3,328,096	11 81	3,099,223	11 42	3,584,586	13 61	87
Lennox and Addington	228,350	9 55	233,642	10 11	236,046	11 28	85
Frontenac	263,876	9 44	248,966	10 08	294,093	11 52	82
Leeds and Grenville	717,431	10 64	682,160	10 99	737,848	12 11	88
Dundas	401,293	12 80	387,284	13 20	381,514	13 69	93
Stormont	316,967	12 48	259,215	10 47	316,444	13 01	96
Glengarry	315,041	10 19	375,037	12 21	369,094	12 51	81
Prescott	324,987	12 02	253,790	9 41	274,583	11 04	109
Russell	217,819	10 84	177,889	9 31	209,346	11 95	91
Carleton	661,280	10 42	623,320	10 91	743,699	13 49	77
Renfrew	469,125	10 98	404,937	10 22	464,729	12 56	87
Lanark	409,734	10 13	406,563	10 78	422,944	12 65	80
Totals	4,325,903	10 79	4,052,803	10 80	4,450,340	12 47	87
Victoria	442,188	11 57	363,075	9 60	424,417	12 26	94
Peterborough	326,156	10 72	304,270	9 94	334,795	12 24	88
Haliburton	55,776	11 20	38,248	8 92	45,993	10 22	110
Hastings	478,351	10 60	412,755	10 18	459,451	11 42	93
Totals	1,302,471	10 97	1,118,348	9 87	1,264,656	11 85	93
Muskoka	88,885	9 64	66,145	8 32	85,146	11 01	88
Parry Sound	41,622	11 08	57,467	10 92	49,409	11 61	95
Algoma	45,579	10 99	32,006	9 03	43,319	12 72	86
Totals	176,086	10 28	155,618	9 29	177,874	11 55	89
The Province	18,772,995	11 57	17,397,369	11 27	19,544,308	13 11	88

VALUES—RYE.

TABLE No. XII.—Showing by County Municipalities and groups of Counties the marketable value of Rye in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value. per acre.	Value.	Value. per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	7,178	10 81	16,035	11 73	9,759	12 12	89
Kent	5,207	9 62	9,025	16 56	6,671	13 42	72
Elgin	8,701	9 08	9,224	7 52	12,182	10 36	88
Norfolk	43,171	7 23	53,832	8 39	64,504	9 17	79
Haldimand	2,245	8 22	3,068	8 97	11,881	10 81	76
Welland	5,451	10 86	11,170	10 30	7,402	10 51	103
Totals	71,953	8 08	102,354	9 32	112,399	9 93	81
Lambton	408	8 87	2,373	9 57	2,147	9 76	91
Huron	3,727	15 66	1,118	8 28	3,205	11 13	141
Bruce	2,349	7 83	980	13 80	3,861	9 98	78
Totals	6,484	11 10	4,471	9 85	9,213	10 29	108
Grey	1,462	10 44	3,875	12 42	6,266	10 80	97
Simcoe	8,835	8 14	12,884	11 04	28,801	12 07	67
Totals	10,297	8 41	16,759	11 33	35,067	11 82	71
Middlesex	1,789	10 05	3,853	11 04	4,602	10 88	92
Oxford	6,368	10 61	5,837	8 28	10,488	9 07	117
Brant	3,372	7 93	5,703	7 87	7,388	9 03	88
Perth	1,284	10 44	1,755	11 04	2,265	10 02	104
Wellington	3,379	9 71	4,662	8 28	9,480	11 22	87
Waterloo	2,970	9 22	4,353	9 57	6,462	10 92	90
Dufferin	7,647	13 05	2,489	5 52	10,528	11 20	117
Totals	26,809	10 38	28,652	8 34	51,213	10 24	101
Lincoln	2,645	9 03	2,227	10 17	5,749	9 76	93
Wentworth	1,974	8 09	2,042	9 54	11,036	11 30	72
Halton	1,715	8 09	444	9 66	5,987	10 83	75
Peel	4,416	10 44	5,902	9 66	22,949	12 94	81
York	4,953	8 05	6,112	8 83	21,072	9 87	82
Ontario	11,074	7 41	13,244	8 48	38,572	11 21	66
Durham	29,630	7 95	17,548	6 97	54,918	9 67	82
Northumberland	52,804	7 56	63,866	7 97	106,338	8 77	86
Prince Edward	56,312	7 15	65,133	9 06	83,247	8 51	84
Totals	165,523	7 57	176,518	8 38	349,868	9 44	80
Lennox and Addington	29,887	8 28	29,275	7 68	57,820	9 39	88
Frontenac	5,916	8 15	23,468	9 75	48,937	10 75	76
Leeds and Grenville	19,193	8 35	35,427	9 03	101,335	11 38	73
Dundas	10,556	11 17	15,801	10 76	26,767	15 14	74
Stormont	2,629	12 70	2,048	5 52	8,218	13 23	96
Glengarry	172	7 82	22	11 04	878	11 11	70
Prescott	2,757	10 21	2,661	11 04	4,029	11 13	92
Russell	.....	.....	1,005	11 04	3,968	12 52	.....
Carleton	29,992	9 87	41,595	9 30	86,316	11 18	88
Renfrew	54,391	11 07	65,081	10 68	94,531	12 64	88
Lanark	18,544	8 67	30,156	11 41	78,096	12 39	70
Totals	174,037	9 58	246,539	9 66	510,895	11 54	83
Victoria	5,649	7 31	6,855	8 93	13,370	10 07	73
Peterborough	26,619	8 70	22,083	8 93	37,478	10 11	86
Haliburton	1,152	7 68	1,487	7 95	3,213	11 00	70
Hastings	82,464	8 42	90,837	8 00	165,120	9 89	85
Totals	115,884	8 41	121,262	8 21	219,181	9 95	85
Muskoka	3,204	9 40	2,631	8 63	5,734	12 52	75
Parry Sound	2,779	11 48	2,211	9 83	6,315	13 18	87
Algoma	603	7 83	474	9 11	1,092	10 81	72
Totals	6,586	9 98	5,316	9 13	13,141	12 66	79
The Province	577,573	8 52	701,871	8 96	1,300,977	10 44	82

VALUES—PEASE.

TABLE No. XIII.—Showing by County Municipalities and groups of Counties the marketable value of Pease in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	43,246	9 83	39,325	10 49	42,650	12 17	81
Kent	156,611	12 16	134,355	12 59	97,438	12 96	94
Elgin	195,531	12 41	163,852	12 96	126,310	12 54	99
Norfolk	192,728	11 49	186,319	11 60	164,217	13 31	86
Haldimand	208,036	11 64	140,978	11 37	149,824	12 07	96
Welland	39,636	9 74	47,883	10 03	38,694	10 76	91
Totals	835,788	11 65	712,712	11 82	619,133	12 52	93
Lambton	157,714	12 78	125,847	13 10	95,095	12 73	100
Huron	433,838	12 69	458,709	14 82	408,191	14 25	89
Bruce	498,498	12 50	513,174	14 29	522,872	14 90	84
Totals	1,090,050	12 61	1,097,730	14 36	1,026,158	14 41	88
Grey	560,219	12 03	554,624	12 85	616,196	14 18	85
Simcoe	426,315	12 45	390,382	12 32	437,309	14 46	86
Totals	986,534	12 21	945,006	12 63	1,053,505	14 29	85
Middlesex	313,747	12 27	267,698	12 39	220,990	12 27	100
Oxford	240,081	13 01	223,995	14 08	187,344	14 24	91
Brant	110,339	11 05	118,947	12 61	108,970	13 11	84
Perth	331,584	14 34	325,940	15 12	302,915	14 71	97
Wellington	510,266	13 32	519,932	13 98	520,084	14 72	90
Waterloo	192,571	12 45	211,492	14 84	193,506	14 95	83
Dufferin	133,676	12 79	144,222	12 68	141,776	13 11	98
Totals	1,832,264	12 96	1,812,226	13 80	1,675,585	14 06	92
Lincoln	55,056	10 57	54,449	10 99	51,510	12 25	86
Wentworth	129,862	11 68	139,960	13 37	124,495	13 45	87
Halton	130,591	12 14	145,671	12 59	145,985	14 83	82
Peel	157,576	11 50	181,177	12 61	168,032	13 76	84
York	365,371	12 31	351,886	12 42	364,839	14 21	87
Ontario	387,522	13 02	304,394	12 56	342,925	13 92	94
Durham	272,178	12 50	235,695	11 98	288,589	13 56	92
Northumberland	232,839	11 18	198,971	10 34	234,543	11 98	93
Prince Edward	191,932	10 89	153,547	14 40	104,949	12 19	89
Totals	1,922,927	11 99	1,765,750	12 30	1,825,867	13 50	89
Lennox and Addington	110,441	11 25	109,909	11 24	111,469	12 86	87
Frontenac	123,740	9 82	119,541	10 71	146,524	12 45	79
Leeds and Grenville	65,492	10 89	71,855	11 73	83,112	12 99	84
Dundas	17,158	12 26	20,379	10 52	25,968	14 58	84
Stormont	27,609	10 73	29,508	10 83	38,724	13 60	79
Glengarry	58,017	9 34	72,268	10 32	77,937	11 52	81
Prescott	84,185	10 85	94,106	8 04	107,633	9 82	110
Russell	34,051	9 17	40,964	10 25	58,696	12 94	71
Carleton	152,123	10 86	154,162	11 68	187,329	13 81	79
Renfrew	231,199	10 02	239,791	10 82	274,797	13 17	76
Lanark	135,798	10 89	177,309	14 87	171,289	15 17	72
Totals	1,039,813	10 44	1,129,792	11 11	1,283,478	12 91	81
Victoria	201,281	11 87	184,206	11 34	208,674	13 40	89
Peterborough	190,621	11 18	186,298	11 31	197,425	13 20	85
Haliburton	17,359	11 18	15,145	9 47	18,955	12 57	89
Hastings	242,071	11 82	179,828	11 10	210,323	11 96	99
Totals	651,332	11 62	565,477	11 20	635,377	12 80	91
Muskoka	33,074	12 04	32,471	11 31	34,387	13 23	91
Parry Sound	11,496	10 15	15,563	11 54	17,021	13 18	77
Algoma	35,726	9 90	46,864	14 50	50,061	15 98	62
Totals	80,296	10 72	94,898	12 73	101,469	14 45	74
The Province	8,439,004	11 99	8,123,591	12 57	8,220,572	13 59	88

VALUES—WHEAT TO PEASE.

TABLE No. XIV.—Showing by County Municipalities and groups of Counties the aggregate marketable value of Wheat, Barley, Oats, Rye and Pease in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	1,035,489	14 65	1,032,259	15 57	1,064,884	15 67	93
Kent	1,758,330	14 90	1,953,212	17 21	1,810,063	16 55	90
Elgin	1,430,431	14 76	1,395,636	14 92	1,510,014	16 03	92
Norfolk	967,438	10 92	1,268,885	14 46	1,225,342	14 34	76
Haldimand	1,034,171	11 33	1,297,089	15 47	1,165,181	13 59	83
Welland	613,877	12 40	708,210	13 26	681,963	13 17	94
Totals	6,839,736	13 28	7,655,291	15 36	7,457,447	15 08	88
Lambton	1,375,964	13 33	1,636,996	15 71	1,494,043	14 89	90
Huron	2,981,566	13 52	3,081,911	14 06	3,450,045	15 62	87
Bruce	2,352,411	12 96	2,410,072	13 92	2,673,937	15 19	85
Totals	6,709,941	13 28	7,128,979	14 36	7,618,025	15 32	87
Grey	2,533,232	11 51	2,363,276	10 96	3,171,690	14 04	82
Simcoe	2,725,412	12 87	2,767,660	13 17	3,253,429	15 54	83
Totals	5,258,644	12 18	5,130,936	12 05	6,425,119	14 76	83
Middlesex	2,600,612	13 69	2,733,401	14 02	3,052,548	15 89	86
Oxford	1,821,712	13 72	1,900,823	14 21	2,101,873	15 94	86
Brant	923,717	11 96	1,141,547	14 84	1,201,518	15 81	76
Perth	2,169,838	14 32	2,200,394	14 47	2,522,254	16 34	88
Wellington	2,437,984	13 06	2,428,022	12 91	2,811,644	15 07	87
Waterloo	1,442,396	13 08	1,715,767	15 47	1,830,622	16 75	78
Dufferin	1,025,171	12 62	1,004,355	12 14	1,135,339	13 88	91
Totals	12,421,430	13 36	13,124,309	13 97	14,655,798	15 73	85
Lincoln	595,321	11 86	803,175	15 59	777,085	15 02	79
Wentworth	1,007,291	11 54	1,355,375	16 28	1,359,448	15 96	72
Halton	750,877	11 26	1,055,038	15 77	1,054,026	15 62	72
Peel	1,402,363	12 25	1,930,217	16 91	1,878,034	16 46	74
York	2,852,874	13 91	3,033,147	14 67	3,419,824	16 52	84
Ontario	2,463,700	14 54	1,947,529	11 77	2,624,569	15 48	94
Durham	1,968,039	13 43	1,649,136	11 50	2,233,232	15 01	89
Northumberland	1,606,218	11 33	1,604,302	11 35	1,914,269	13 20	86
Prince Edward	832,194	10 05	897,492	11 02	940,924	11 36	88
Totals	13,478,877	12 66	14,275,411	13 54	16,201,411	15 12	84
Lennox and Addington	904,600	10 93	962,122	11 50	1,106,849	12 64	86
Frontenac	666,112	10 43	798,995	11 78	942,671	13 03	80
Leeds and Grenville	1,179,525	11 32	1,221,492	12 25	1,419,066	13 14	86
Dundas	606,037	13 45	621,176	13 77	681,138	15 00	90
Stormont	448,210	12 61	403,636	11 58	492,904	13 85	91
Glengarry	521,581	10 79	605,686	12 55	605,237	12 84	84
Prescott	603,173	12 86	466,813	9 53	533,217	11 47	112
Russell	331,723	11 19	300,808	10 44	362,317	12 78	88
Carleton	1,237,468	11 14	1,250,830	12 00	1,512,052	13 90	80
Renfrew	1,076,472	11 09	1,077,907	11 28	1,276,253	13 70	81
Lanark	795,574	10 73	919,981	12 37	991,994	13 87	77
Totals	8,370,475	11 33	8,629,446	11 80	9,923,698	13 33	85
Victoria	1,587,392	12 47	1,338,049	10 81	1,750,892	13 94	89
Peterborough	1,236,746	12 27	1,017,472	10 01	1,326,501	13 69	90
Haliburton	90,879	11 27	72,577	9 38	87,618	10 98	103
Hastings	1,623,709	11 89	1,441,025	11 46	1,861,552	13 02	91
Totals	4,538,726	12 17	3,869,123	10 78	5,026,563	13 46	90
Muskoka	146,007	10 26	128,133	9 48	155,765	11 98	86
Parry Sound	82,615	11 22	113,409	11 94	112,416	12 96	87
Algoma	154,232	10 93	157,817	12 06	241,682	16 53	66
Totals	382,854	10 72	399,359	11 06	509,863	14 05	76
The Province	58,000,683	12 63	60,212,854	13 26	67,817,924	14 79	85

VALUES—CORN.

TABLE No. XV.—Showing by County Municipalities and groups of Counties the marketable value of Corn in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	647,786	20 70	642,183	20 03	644,985	20 36	102
Kent	532,244	20 05	491,745	18 63	511,994	19 34	104
Elgin	284,874	21 62	296,084	20 65	290,479	21 11	102
Norfolk	262,952	20 01	232,832	19 02	247,892	19 53	102
Haldimand	22,490	20 06	19,599	17 36	21,045	18 71	108
Welland	94,496	18 91	97,021	17 56	95,758	18 20	104
Totals	1,844,842	20 44	1,779,464	19 41	1,812,153	19 92	103
Lambton	103,165	17 93	115,306	18 11	109,236	18 02	100
Huron	22,039	21 73	29,074	22 79	25,556	22 32	97
Bruce	8,521	19 32	9,171	18 83	8,846	19 06	101
Totals	133,725	18 55	153,551	18 88	143,638	18 73	99
Grey	6,143	16 56	4,302	16 74	5,222	16 63	100
Simcoe	12,109	15 87	8,872	13 95	10,491	14 99	106
Totals	18,252	16 10	13,174	14 72	15,713	15 50	104
Middlesex	179,138	18 48	179,280	19 56	179,209	19 00	97
Oxford	128,483	18 32	127,471	18 13	127,977	18 23	100
Brant	76,314	19 89	74,155	19 18	75,234	19 54	102
Perth	8,887	19 32	8,964	19 53	8,926	19 40	100
Wellington	4,703	16 56	7,324	19 53	6,014	18 28	91
Waterloo	15,363	21 16	15,341	15 00	15,352	17 55	121
Dufferin	530	16 56	1,309	19 53	919	18 76	88
Totals	413,418	18 75	413,844	18 83	413,631	18 79	100
Lincoln	93,500	17 77	110,819	19 06	102,160	18 45	96
Wentworth	57,589	18 47	77,379	20 09	67,484	19 36	95
Halton	9,031	11 04	12,712	15 81	10,871	13 40	82
Peel	6,193	17 25	5,195	19 53	5,694	18 25	95
York	16,200	17 94	22,521	22 32	19,360	20 25	89
Ontario	35,046	17 48	21,226	11 16	28,136	14 41	121
Durham	20,658	16 25	18,774	11 90	19,716	13 85	117
Northumberland	44,057	14 77	36,162	10 32	40,110	12 37	119
Prince Edward	33,521	12 42	48,125	9 35	40,823	10 40	119
Totals	315,795	16 26	352,913	14 78	334,354	15 45	105
Lennox and Addington	21,579	15 55	28,143	15 35	24,861	15 43	101
Frontenac	15,527	13 25	27,667	15 35	21,597	14 51	91
Leeds and Grenville	62,263	18 00	56,453	12 95	59,358	15 18	119
Dundas	23,771	17 94	19,251	13 95	21,511	15 90	113
Stormont	12,354	16 56	18,448	16 74	15,401	16 67	99
Glengarry	6,124	19 32	9,221	13 95	7,672	15 69	123
Prescott	19,927	14 90	18,904	13 72	19,416	14 30	104
Russell	4,413	18 86	4,542	11 16	4,477	13 99	135
Carleton	10,603	10 49	21,563	18 83	16,083	14 92	70
Renfrew	5,081	19 32	5,279	11 16	5,180	14 08	137
Lanark	12,038	12 97	12,845	11 16	12,442	11 97	108
Totals	193,680	15 90	222,316	14 16	207,998	14 92	107
Victoria	5,560	23 46	6,278	13 95	5,919	17 26	136
Peterborough	2,926	18 40	7,690	14 65	5,308	15 52	119
Haliburton	1,007	13 79	1,827	13 95	1,417	13 89	99
Hastings	50,769	14 26	42,714	10 23	46,742	12 08	118
Totals	60,262	14 96	58,509	11 08	59,386	12 76	117
Muskoka	1,711	10 69	1,813	9 30	1,762	9 90	108
Parry Sound	469	13 79	469	16 74	469	15 13	91
Algoma	111	13 88	795	13 95	453	14 16	98
Totals	2,291	11 34	3,077	10 99	2,684	11 14	98
The Province	2,982,265	19 06	2,996,848	17 86	2,989,557	18 44	103

VALUES—BUCKWHEAT.

TABLE No. XVI.—Showing by County Municipalities and groups of Counties the marketable value of Buckwheat in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the two years 1885-6

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	6,043	9 16	12,141	12 74	9,092	11 28	81
Kent	6,340	7 25	9,226	9 31	7,783	8 34	87
Elgin	9,902	6 67	10,990	8 07	10,446	7 34	91
Norfolk	33,591	6 96	38,920	8 36	36,256	7 65	91
Haldimand	7,014	7 41	3,139	5 80	5,076	6 83	108
Welland	12,606	6 38	15,071	9 21	13,839	7 66	83
Totals	75,496	7 01	89,487	8 83	82,492	7 89	89
Lambton	1,437	4 61	4,878	9 02	3,157	7 39	62
Huron	2,701	5 39	2,107	8 33	2,404	6 38	84
Bruce	3,645	5 90	1,513	6 66	2,579	6 11	97
Totals	7,783	5 44	8,498	8 32	8,140	6 64	82
Grey	3,315	7 30	2,893	7 84	3,104	7 53	97
Simcoe	2,923	5 39	1,795	7 84	2,359	6 13	88
Totals	6,238	6 26	4,688	7 84	5,463	6 85	91
Middlesex	5,560	6 57	3,532	8 23	4,546	7 13	92
Oxford	4,497	7 86	5,715	7 84	5,106	7 84	100
Brant	4,422	7 70	6,323	8 72	5,373	8 27	93
Perth	1,301	6 74	1,434	9 02	1,367	7 77	87
Wellington	1,355	7 92	293	8 62	824	8 08	98
Waterloo	712	7 42	1,113	7 84	912	7 66	97
Dufferin	725	6 09	925	7 84	825	6 99	87
Totals	18,572	7 22	19,335	8 28	18,953	7 72	94
Lincoln	5,269	7 83	4,323	8 53	4,796	8 13	96
Wentworth	5,173	6 95	7,575	9 80	6,374	8 41	83
Halton	898	6 07	706	4 70	802	5 38	113
Peel	337	6 74	2,311	8 82	1,324	8 49	79
York	2,351	7 30	627	7 84	1,489	7 41	99
Ontario	5,095	10 11	1,646	7 84	3,370	9 44	107
Durham	10,132	7 29	7,989	7 84	9,061	7 52	97
Northumberland	58,932	7 65	36,785	8 16	47,858	7 84	98
Prince Edward	57,484	7 32	72,516	11 20	65,000	9 07	81
Totals	145,671	7 51	134,478	9 62	140,074	8 39	90
Lennox and Addington	35,405	7 78	23,048	10 65	29,227	8 71	89
Frontenac	13,281	7 82	14,804	11 11	14,042	9 27	84
Leeds and Grenville	41,151	8 11	57,953	10 29	49,552	9 26	88
Dundas	15,072	10 59	21,312	13 33	18,192	12 04	88
Stormont	22,446	11 80	27,471	11 76	24,959	11 77	100
Glengarry	5,217	7 58	7,025	11 37	6,121	9 37	81
Prescott	13,783	9 15	17,464	8 62	15,623	8 85	103
Russell	13,243	10 78	5,419	7 06	9,331	9 35	115
Carleton	35,740	9 14	40,783	10 39	38,262	9 76	94
Renfrew	13,706	10 45	15,021	10 31	14,363	10 38	101
Lanark	46,094	8 09	62,439	10 14	54,267	9 15	88
Totals	255,138	8 80	292,739	10 45	273,939	9 61	92
Victoria	1,870	5 05	1,447	3 92	1,659	4 48	113
Peterborough	6,875	8 09	7,344	8 72	7,110	8 40	96
Haliburton	1,403	7 58	1,348	3 92	1,375	5 21	145
Hastings	43,472	8 84	36,040	10 08	39,756	9 36	94
Totals	53,620	8 48	46,179	9 00	49,900	8 71	97
Muskoka	2,680	11 12	1,922	7 45	2,301	9 24	120
Parry Sound	438	6 74	2,179	8 82	1,308	8 38	80
Algoma	89	5 93	519	9 80	304	8 94	66
Totals	3,207	9 99	4,620	8 28	3,913	8 91	112
The Province	565,725	7 99	600,024	9 71	582,874	8 79	91

VALUES—BEANS.

TABLE No. XVII.—Showing by County Municipalities and groups of Counties the marketable value of Beans in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	10,107	20 93	18,044	26 00	14,076	23 90	88
Kent	224,259	18 58	210,175	14 80	217,217	16 54	112
Elgin	19,711	22 32	21,749	18 40	20,730	20 07	111
Norfolk	5,138	14 68	8,071	12 53	6,604	13 29	110
Haldimand	440	12 57	1,128	12 00	784	12 25	103
Welland	7,971	16 64	6,927	10 64	7,449	13 18	126
Totals	267,626	18 72	266,094	15 23	266,860	16 80	111
Lambton	6,076	16 92	7,665	17 03	6,870	16 97	100
Huron	4,570	25 11	2,320	20 00	3,445	23 12	109
Bruce	1,627	10 04	1,953	17 60	1,790	13 16	76
Totals	12,273	17 46	11,938	17 63	12,105	17 54	100
Grey	1,821	18 97	1,620	12 00	1,720	14 83	128
Simcoe	2,218	20 92	1,616	16 00	1,917	18 61	112
Totals	4,039	20 00	3,236	13 71	3,637	16 61	120
Middlesex	3,626	15 90	5,241	15 60	4,433	15 72	101
Oxford	2,637	20 93	4,120	20 00	3,379	20 36	103
Brant	3,638	17 41	3,965	20 20	3,802	14 24	122
Perth	753	25 10	496	16 00	624	20 13	125
Wellington	921	16 75	516	12 00	718	14 65	114
Waterloo	1,038	16 74	464	16 00	751	16 33	103
Dufferin	552	16 73	96	16 00	324	17 05	98
Totals	13,165	17 72	14,898	15 26	14,031	16 32	109
Lincoln	2,354	18 83	2,704	16 00	2,529	17 20	109
Wentworth	1,657	25 11	1,456	16 00	1,557	19 71	127
Halton	1,356	16 74	608	16 00	982	16 64	101
Peel	670	16 75	595	19 20	632	18 06	93
York	1,723	26 51	3,460	20 00	2,592	21 78	122
Ontario	2,938	25 11	3,820	20 00	3,379	21 94	114
Durham	4,013	17 08	4,930	15 60	4,472	16 20	105
Northumberland	9,125	26 45	5,920	16 26	7,522	21 19	125
Prince Edward	13,001	15 63	4,963	18 80	8,982	16 39	95
Totals	36,837	19 33	28,456	17 38	32,647	18 42	105
Lennox and Addington	2,960	13 39	1,141	12 54	2,050	13 14	102
Frontenac	9,341	23 29	9,273	25 36	9,307	24 30	96
Leeds and Grenville	7,622	24 27	5,351	13 86	6,487	18 53	131
Dundas	4,709	24 27	1,920	16 00	3,315	21 11	115
Stormont	1,393	18 82	2,688	32 00	2,041	25 82	73
Glengarry	2,511	25 11	960	20 00	1,735	23 45	107
Prescott	7,364	21 34	10,419	17 60	8,892	18 96	113
Russell	1,984	12 56	5,852	22 00	3,918	18 48	68
Carleton	8,393	19 61	10,174	21 60	9,283	20 63	95
Renfrew	10,987	26 22	11,963	30 13	11,475	28 13	93
Lanark	2,561	23 71	3,108	16 80	2,834	19 41	122
Totals	59,825	21 66	62,849	20 91	61,337	21 27	102
Victoria	954	16 74	752	16 00	853	16 40	102
Peterborough	1,758	19 53	2,520	8 00	2,139	10 59	184
Haliburton	293	20 93	752	16 00	523	17 43	120
Hastings	5,665	22 39	4,416	24 00	5,040	23 02	97
Totals	8,670	20 94	8,440	14 23	8,555	17 01	123
Muskoka	791	29 30	988	26 00	890	27 81	105
Parry Sound	117	16 71	272	16 00	194	16 17	103
Algoma	151	16 78	80	16 00	116	16 43	102
Totals	1,059	24 63	1,340	22 33	1,200	23 51	105
The Province	403,494	19 15	397,251	16 12	400,372	17 51	109

VALUES—HAY AND CLOVER.

TABLE No. XVIII.—Showing by County Municipalities and groups of Counties the marketable value of Hay and Clover in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	502,862	13 86	680,211	17 53	591,536	15 76	88
Kent	627,951	12 11	920,670	16 74	774,311	14 50	84
Elgin	622,689	13 08	796,363	15 86	709,526	14 51	90
Norfolk	525,741	13 57	553,205	13 69	539,473	13 63	100
Haldimand	673,988	13 66	730,880	14 48	702,434	14 08	97
Welland	604,288	12 40	662,314	14 38	633,301	13 36	93
Totals	3,557,519	13 05	4,343,643	15 46	3,950,581	14 28	91
Lambton	620,015	11 14	913,489	16 65	766,752	13 88	80
Huron	1,161,686	12 40	1,429,471	15 37	1,295,579	13 88	89
Bruce	884,677	10 76	948,673	11 92	916,675	11 33	95
Totals	2,666,378	11 52	3,291,633	14 47	2,979,006	12 98	89
Grey	1,105,009	9 69	1,299,028	11 13	1,202,019	10 42	93
Simcoe	858,001	11 92	829,646	11 23	843,823	11 57	103
Totals	1,963,010	10 55	2,128.674	11 17	2,045,842	10 86	97
Middlesex	1,165,000	13 08	1,520,791	16 55	1,342,896	14 84	88
Oxford	853,805	14 05	1,060,333	16 55	957,069	15 33	92
Brant	406,583	12 60	464,309	14 78	435,446	13 67	92
Perth	792,468	12 02	1,046,789	15 46	919,628	13 76	87
Wellington	1,144,592	13 66	1,307,893	16 15	1,226,243	14 89	92
Waterloo	660,451	15 31	609,804	14 48	635,127	14 90	103
Dufferin	306,863	9 30	460,369	13 49	383,616	11 43	81
Totals	5,329,762	13 06	6,470,288	15 69	5,900,025	14 39	91
Lincoln	608,474	13 76	669,859	16 45	639,167	15 05	91
Wentworth	494,384	10 77	699,399	15 46	596,891	13 10	82
Halton	415,294	12 11	547,433	15 96	481,363	14 04	86
Peel	596,516	15 41	560,012	14 68	578,264	15 04	102
York	893,176	12 11	1,016,865	13 49	955,020	12 81	95
Ontario	746,953	13 95	762,055	14 58	754,504	14 26	101
Durham	634,705	14 15	582,283	13 40	608,494	13 78	103
Northumberland	786,198	13 95	725,847	13 30	756,023	13 63	102
Prince Edward	523,221	14 54	532,983	16 15	528,102	15 31	95
Totals	5,698,921	13 33	6,096,736	14 62	5,897,828	13 96	95
Lennox and Addington	767,593	15 41	668,234	14 87	717,914	15 15	102
Frontenac	755,936	11 72	847,386	13 59	801,661	12 64	93
Leeds and Grenville	1,477,192	12 11	1,852,795	17 04	1,664,993	14 44	84
Dundas	524,229	15 02	595,886	16 84	560,057	15 94	94
Stormont	471,806	14 53	493,160	15 76	482,483	15 14	96
Glengarry	530,876	15 79	443,358	13 49	487,117	14 66	108
Prescott	445,265	14 15	293,619	9 85	369,442	12 06	117
Russell	209,469	12 50	179,112	9 26	194,291	10 76	116
Carleton	831,228	13 76	716,597	12 31	773,913	13 05	105
Renfrew	742,894	12 40	385,598	6 57	564,246	9 51	130
Lanark	895,094	14 15	911,450	14 87	903,272	14 50	98
Totals	7,651,582	13 45	7,387,195	13 61	7,519,389	13 53	99
Victoria	417,833	10 95	454,075	11 52	435,954	11 24	97
Peterborough	491,167	12 89	426,564	10 34	458,865	11 56	112
Haliburton	95,088	8 92	93,250	9 85	94,169	9 36	95
Hastings	789,066	10 76	896,705	13 59	842,886	12 10	89
Totals	1,793,154	11 19	1,870,594	11 98	1,831,874	11 58	97
Muskoka	217,763	9 59	218,995	10 64	218,379	10 09	95
Parry Sound	61,561	7 27	107,276	10 54	84,419	9 05	80
Algoma	76,532	8 53	118,693	11 91	97,612	10 31	83
Totals	355,856	8 86	444,964	10 93	400,410	9 90	86
The Province	29,016,182	12 64	32,033,727	14 12	30,524,955	13 38	94

VALUES—POTATOES.

TABLE No. XIX.—Showing by County Municipalities and groups of Counties the marketable value of Potatoes in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	108,034	40 48	127,680	42 22	117,857	41 41	98
Kent	173,895	52 89	146,680	41 87	160,288	47 20	112
Elgin	126,522	51 75	77,925	28 33	102,223	39 35	132
Norfolk	108,417	39 03	97,674	28 08	103,045	32 94	118
Haldimand	68,401	56 39	93,614	49 09	81,007	51 93	109
Welland	75,009	41 67	89,364	33 31	82,187	36 67	114
Totals	660,278	46 52	632,937	36 49	646,607	41 00	113
Lambton	110,227	44 55	123,005	38 98	116,616	41 43	108
Huron	194,852	41 56	392,706	72 99	293,779	58 36	71
Bruce	163,390	36 59	375,389	75 76	269,390	57 20	64
Totals	468,469	40 29	891,100	66 05	679,785	54 13	74
Grey	293,296	46 00	582,817	78 38	438,057	63 43	73
Simcoe	335,247	53 19	521,926	75 49	428,586	64 86	82
Totals	628,543	49 57	1,104,743	76 99	866,643	64 13	77
Middlesex	265,238	50 77	173,172	29 59	219,205	39 58	128
Oxford	128,753	48 31	83,696	24 98	106,224	35 31	137
Brant	99,866	53 32	113,672	47 72	106,769	50 20	106
Perth	138,391	43 33	191,721	48 29	165,056	46 08	94
Wellington	258,688	51 19	329,466	53 54	294,077	52 48	98
Waterloo	107,011	40 58	186,423	61 47	146,717	51 75	78
Dufferin	128,867	51 46	207,200	58 85	168,034	55 77	92
Totals	1,126,814	48 67	1,285,350	45 48	1,206,082	46 92	104
Lincoln	86,710	49 52	63,415	36 55	75,062	43 06	115
Wentworth	145,814	48 16	207,704	61 83	176,759	55 34	87
Halton	56,451	40 61	114,340	66 79	85,395	55 06	74
Peel	111,427	46 96	135,924	46 68	123,675	46 81	100
York	293,132	45 89	241,851	29 39	267,492	36 60	125
Ontario	200,628	58 27	201,699	52 84	201,164	55 42	105
Durham	189,400	65 51	154,662	51 14	172,031	58 16	113
Northumberland	158,165	42 66	180,252	44 28	169,209	43 50	98
Prince Edward	122,252	45 06	99,688	46 24	110,970	45 59	99
Totals	1,363,979	49 27	1,399,535	45 12	1,381,757	47 08	105
Lennox and Addington	161,868	52 45	235,742	63 87	198,805	58 68	89
Frontenac	208,701	59 75	120,183	30 71	164,442	44 40	135
Leeds and Grenville	350,632	54 97	479,274	65 12	414,953	60 40	91
Dundas	110,987	47 82	225,156	87 34	168,072	68 63	70
Stormont	101,002	49 39	105,319	51 37	103,160	50 40	98
Glengarry	94,334	38 61	156,087	56 51	125,211	48 12	80
Prescott	149,522	59 36	133,741	52 55	141,632	55 94	106
Russell	52,091	33 96	93,096	54 25	72,593	44 67	76
Carleton	276,619	47 46	384,669	61 14	330,644	54 56	87
Renfrew	298,086	73 82	295,163	75 32	296,624	74 55	99
Lanark	196,684	56 91	281,798	72 09	239,241	64 96	88
Totals	2,000,526	53 86	2,510,228	61 62	2,255,377	57 92	93
Victoria	164,179	60 99	158,579	52 06	161,379	56 25	108
Peterborough	155,115	62 62	137,145	52 79	146,130	57 58	109
Haliburton	47,271	87 06	31,693	48 91	39,482	66 36	131
Hastings	363,157	66 94	351,203	63 52	357,180	65 21	103
Totals	729,722	65 52	678,620	57 41	704,171	61 34	107
Muskoka	111,047	87 44	66,056	47 56	88,551	66 58	131
Parry Sound	52,753	88 96	49,472	78 78	51,113	83 79	106
Algoma	47,417	71 09	50,419	71 92	48,918	71 52	99
Totals	211,217	83 48	165,947	61 05	188,582	71 87	116
The Province	7,189,548	51 30	8,668,460	54 27	7,929,004	52 88	97

VALUES—CARROTS.

TABLE No. XX.—Showing by County Municipalities and groups of Counties the marketable value of Carrots in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	6,867	78 93	10,666	119 84	8,766	99 61	79
Kent	16,814	98 33	20,748	136 50	18,781	115 93	85
Elgin	13,171	126 64	14,510	103 64	13,841	113 45	112
Norfolk	11,105	102 82	9,092	101 02	10,099	102 01	101
Haldimand	6,465	71 04	8,151	107 25	7,308	88 05	81
Welland	7,234	139 12	7,751	123 03	7,492	131 44	106
Totals	61,656	100 58	70,918	116 25	66,287	108 49	93
Lambton	16,544	104 71	15,561	102 37	16,053	103 57	101
Huron	53,933	118 02	66,239	163 15	60,086	139 09	85
Bruce	24,980	103 65	30,182	151 67	27,581	125 37	83
Totals	95,457	111 52	111,982	147 93	103,720	128 53	87
Grey	62,977	116 62	72,113	142 80	67,545	129 15	90
Simcoe	70,402	126 62	69,290	120 71	69,846	123 62	102
Totals	133,379	121 70	141,403	131 05	137,391	126 28	96
Middlesex	52,496	110 29	42,564	92 93	47,530	101 78	108
Oxford	35,671	127 85	29,678	103 41	32,675	115 46	111
Brant	20,206	132 93	33,953	164 82	27,079	151 28	88
Perth	48,941	139 83	62,433	138 12	55,687	138 87	101
Wellington	23,557	92 74	23,457	114 43	23,507	102 20	91
Waterloo	46,268	145 04	33,118	130 90	39,693	138 79	105
Dufferin	14,563	118 40	14,105	113 75	14,334	116 54	102
Totals	241,702	123 76	239,308	120 56	240,505	122 15	101
Lincoln	9,762	100 64	10,651	109 81	10,206	105 22	96
Wentworth	19,965	140 60	31,142	141 56	25,553	141 18	100
Halton	19,903	121 36	9,084	105 62	14,494	115 95	105
Peel	23,224	86 33	19,565	75 83	21,395	81 35	106
York	67,527	116 43	111,625	174 69	89,576	146 85	79
Ontario	57,255	112 71	64,291	136 50	60,773	124 03	91
Durham	50,001	119 62	60,697	131 95	55,349	126 08	95
Northumberland	25,605	107 58	22,289	103 19	23,947	105 49	102
Prince Edward	2,294	74 00	1,885	65 00	2,090	69 63	106
Totals	275,536	112 60	331,229	133 78	303,383	123 23	91
Lennox and Addington	5,000	84 75	4,095	73 12	4,547	78 40	108
Frontenac	19,121	84 61	13,979	125 94	16,550	97 93	86
Leeds and Grenville	14,003	88 63	9,921	89 37	11,962	88 61	100
Dundas	5,061	88 79	2,275	81 25	3,668	87 33	102
Stormont	1,657	118 36	845	65 00	1,251	96 23	123
Glengarry	2,546	59 21	2,015	65 00	2,280	61 62	96
Prescott	5,594	124 31	2,795	65 00	4,194	95 32	130
Russell	8,135	83 87	13,542	108 33	10,839	97 65	86
Carleton	48,526	92 25	54,305	117 54	51,416	104 08	89
Renfrew	11,544	111 00	7,219	73 67	9,382	92 89	119
Lanark	12,960	91 27	15,072	142 19	14,016	113 03	81
Totals	134,147	91 19	126,063	106 47	130,105	97 97	93
Victoria	33,523	122 35	34,207	124 39	33,865	123 15	99
Peterborough	27,374	100 64	32,512	95 62	29,943	97 85	103
Haliburton	3,700	148 00	1,072	89 37	2,386	132 56	112
Hastings	13,660	98 27	24,863	146 25	19,261	125 07	79
Totals	78,257	110 22	92,654	116 25	85,455	113 49	97
Muskoka	5,062	66 61	5,846	76 92	5,454	71 76	93
Parry Sound	2,664	133 20	1,853	97 50	2,258	118 84	112
Algoma	1,850	74 00	3,998	97 50	2,924	88 61	84
Totals	9,576	79 14	11,697	86 01	10,636	83 09	95
The Province	1,029,710	111 12	1,125,254	124 70	1,077,482	117 81	94

VALUES—TURNIPS.

TABLE No. XXI.—Showing by County Municipalities and groups of Counties the marketable value of Turnips in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	12,667	83 34	25,441	86 53	19,054	85 44	98
Kent	21,972	82 60	43,306	118 00	32,639	102 96	80
Elgin	23,700	98 75	21,137	83 55	22,418	91 13	108
Norfolk	96,943	115 68	54,924	90 34	75,934	105 03	110
Haldimand	4,551	65 01	3,147	62 94	3,849	64 15	101
Welland	18,044	110 70	9,770	106 20	13,907	109 50	101
Totals	177,877	102 88	157,725	94 79	167,801	98 94	104
Lambton	22,627	103 32	11,319	65 05	16,973	86 60	119
Huron	697,446	121 55	662,714	95 84	680,080	107 49	113
Bruce	624,328	118 49	726,223	128 54	675,275	123 68	96
Totals	1,344,401	119 76	1,400,256	109 92	1,372,328	114 52	105
Grey	983,947	118 22	966,842	107 63	975,395	112 72	105
Simcoe	451,724	117 12	332,083	104 72	391,904	111 53	105
Totals	1,435,671	117 87	1,298,925	106 87	1,367,299	112 38	105
Middlesex	172,371	111 49	121,515	76 96	146,943	94 07	119
Oxford	620,355	124 85	449,673	87 96	535,014	106 13	118
Brant	303,745	125 15	310,105	124 49	306,925	124 82	100
Perth	546,498	133 45	375,699	74 93	461,099	101 25	132
Wellington	1,681,054	137 31	1,260,098	94 79	1,470,576	115 18	119
Waterloo	588,356	120 54	418,499	81 42	503,428	100 46	120
Dufferin	214,441	107 11	182,062	72 77	198,251	88 03	122
Totals	4,126,820	128 31	3,117,651	88 74	3,622,236	107 65	119
Lincoln	19,974	92 47	12,896	71 64	16,435	83 01	111
Wentworth	354,722	148 42	283,863	133 02	319,293	141 16	105
Halton	211,887	116 17	157,390	97 94	184,639	107 66	108
Peel	118,911	94 30	77,564	66 87	98,238	81 19	116
York	309,720	109 67	324,626	107 89	317,173	108 73	101
Ontario	1,299,640	111 60	1,037,047	88 13	1,168,343	99 80	112
Durham	624,842	105 00	591,449	110 45	608,145	107 58	98
Northumberland	358,982	105 27	338,350	103 25	348,666	104 27	101
Prince Edward	9,648	91 02	2,549	70 80	6,098	85 89	106
Totals	3,308,326	111 66	2,825,734	99 06	3,067,030	105 48	106
Lennox and Addington	6,281	66 12	12,248	70 80	9,264	69 13	96
Frontenac	45,154	80 92	48,873	92 04	47,014	86 26	94
Leeds and Grenville	16,870	86 51	18,101	116 03	17,486	99 92	87
Dundas	3,444	82 00	2,974	70 80	3,209	76 40	107
Stormont	8,180	86 11	5,487	59 00	6,833	72 69	118
Glengarry	7,195	110 69	2,266	70 80	4,731	98 54	112
Prescott	17,145	127 00	13,334	118 00	15,239	122 90	103
Russell	18,155	84 05	19,659	82 60	18,907	83 29	101
Carleton	151,889	99 01	122,654	83 78	137,271	91 58	108
Renfrew	55,611	90 57	47,195	69 81	51,403	79 69	114
Lanark	51,523	88 83	30,877	98 33	41,200	92 17	96
Totals	381,447	92 38	323,668	84 46	352,557	88 58	104
Victoria	374,336	120 37	264,911	72 12	319,623	94 23	128
Peterborough	122,497	97 37	85,715	77 29	104,106	87 93	111
Haliburton	28,946	103 01	20,812	49 96	24,879	72 32	142
Hastings	82,621	90 49	51,367	87 66	66,994	89 44	101
Totals	608,400	109 39	422,805	73 21	515,602	90 95	120
Muskoka	92,977	85 22	74,547	65 22	83,762	74 99	114
Parry Sound	46,494	86 10	52,502	69 82	49,498	76 62	112
Algoma	54,606	79 95	34,692	59 00	44,649	70 31	114
Totals	194,077	83 87	161,741	65 14	177,909	74 19	113
The Province	11,577,019	117 02	9,708,505	94 90	10,642,762	105 77	111

VALUES—CORN TO TURNIPS.

TABLE No. XXII.—Showing by County Municipalities and groups of Counties the marketable value of Corn, Buckwheat, Beans, Hay, Potatoes, Carrots and Turnips in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	1,294,366	18 07	1,516,366	19 88	1,405,366	19 05	95
Kent	1,603,475	16 87	1,842,550	18 32	1,723,013	17 61	96
Elgin	1,100,569	16 69	1,238,758	17 63	1,169,663	17 18	97
Norfolk	1,043,887	17 17	994,718	16 01	1,019,303	16 59	103
Haldimand	783,349	14 83	859,658	15 84	821,503	15 34	97
Welland	819,648	14 09	888,218	15 66	853,933	14 87	95
Totals	6,645,294	16 43	7,340,268	17 48	6,992,781	16 97	97
Lambton	880,091	13 56	1,191.223	18 13	1,035,657	15 86	85
Huron	2,137,227	20 12	2,584,631	24 07	2,360,929	22 10	91
Bruce	1,711,168	18 31	2,093,104	22 94	1,902,136	20 60	89
Totals	4,728,486	17 87	5,868,958	22 20	5,298,722	20 04	89
Grey	2,456,508	18 87	2,929,615	21 80	2,693,062	20 36	93
Simcoe	1,732,624	20 60	1,765,228	20 64	1,748,926	20 62	100
Totals	4,189,132	19 55	4,694,843	21 35	4,441,988	20 46	96
Middlesex	1,843,429	17 22	2,046,095	18 65	1,944,762	17 94	96
Oxford	1,774,201	23 22	1,760,686	21 79	1,767,444	22 49	103
Brant	914,774	22 12	1,006,482	24 30	960,628	23 21	95
Perth	1,537,239	20 70	1,687,536	21 70	1,612,387	21 21	98
Wellington	3,114,870	30 59	2,929,047	28 98	3,021,959	29 79	103
Waterloo	1,419,199	27 37	1,264,762	24 45	1,341,980	25 91	106
Dufferin	666,541	17 63	866,066	21 41	766,303	19 59	90
Totals	11,270,253	22 97	11,560,674	22 99	11,415,463	22 98	100
Lincoln	826,043	15 78	8 4,667	17 77	850,355	16 74	94
Wentworth	1,079,304	19 48	1,308,518	23 51	1,193,911	21 50	91
Halton	714,820	18 47	842,273	21 76	778,546	20 11	92
Peel	857,278	19 90	801,166	18 61	829,222	19 26	103
York	1,583,829	18 67	1,721,575	19 45	1,652,702	19 07	98
Ontario	2,347,555	32 72	2,091,784	29 62	2,219,669	31 18	105
Durham	1,533,751	26 90	1,420,784	25 73	1,477,268	26 32	102
Northumberland	1,441,064	19 28	1,345,605	19 08	1,393,335	19 18	101
Prince Edward	761,421	15 16	762,709	16 19	762,065	15 66	97
Totals	11,145,065	21 10	11,169,081	21 54	11,157,073	21 32	99
Lennox and Addington	1,000,686	16 90	972,651	18 37	986,668	17 59	96
Frontenac	1,067,061	14 82	1,082,165	15 37	1,074,613	15 09	98
Leeds and Grenville	1,969,733	14 32	2,479,848	19 57	2,224,791	16 84	85
Dundas	687,273	17 07	868,774	21 13	778,024	19 12	89
Stormont	618,838	16 57	653,418	17 67	636,128	17 12	97
Glengarry	648,803	17 41	620,932	16 78	634,867	17 10	102
Prescott	658,600	17 63	490,276	13 43	574,438	15 55	113
Russell	307,490	15 20	321,222	14 05	314,356	14 59	104
Carleton	1,362,998	18 51	1,350,745	18 77	1,356,872	18 64	99
Renfrew	1,137,909	17 07	767,438	11 67	952,673	14 39	119
Lanark	1,216,954	16 40	1,317,589	18 02	1,267,272	17 21	95
Totals	10,676,345	16 28	10,925,058	17 20	10,800,702	16 73	97
Victoria	998,255	22 23	920,249	19 47	959,252	20 82	107
Peterborough	807,712	18 69	699,490	14 89	753,601	16 71	112
Haliburton	177,708	15 08	150,754	13 64	164,231	14 38	105
Hastings	1,348,410	15 22	1,407,308	17 55	1,377,859	16 33	93
Totals	3,332,085	15 68	3,177,801	17 13	3,254,943	17 41	90
Muskoka	432,031	16 90	370,167	15 63	401,099	16 29	104
Parry Sound	164,496	16 91	214,023	18 03	189,259	17 52	97
Algoma	180,756	17 41	209,196	18 34	194,976	17 90	97
Totals	777,283	17 02	793,386	16 90	785,334	16 96	100
The Province	52,763,943	18 90	55,530,069	19 88	54,147,006	19 39	97

Note.—The value of mangel-wurzels is not given, as market prices of these roots are not quoted in daily or weekly papers.

VALUES OF ALL FIELD CROPS.

TABLE No. XXIII.—Showing by County Municipalities and groups of Counties the total marketable value of all field crops in Ontario in the years 1885 and 1886, with the yearly average for the five years 1882-6; also the average value of produce per acre under crop, and the per cent. ratios of this average in 1886 to that of the five years 1882-6.

Counties.	1886.		1885.		Yearly Average for the five years 1882-6.		Per cent. ratios.
	Value.	Value per acre.	Value.	Value per acre.	Value.	Value per acre.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	2,329,855	16 37	2,548,625	17 92	2,470,250	17 43	94
Kent	3,361,805	15 78	3,795,762	17 73	3,533,076	17 05	93
Elgin	2,531,000	15 54	2,634,394	16 08	2,679,677	16 51	94
Norfolk	2,011,325	13 47	2,263,603	15 11	2,244,645	15 28	88
Haldimand	1,817,520	12 62	2,156,747	15 61	1,986,684	14 26	88
Welland	1,433,525	13 31	1,596,428	14 50	1,535,896	14 06	95
Totals	13,485,030	14 67	14,995,559	16 33	14,450,228	15 94	92
Lambton	2,256,055	13 42	2,828,219	16 64	2,529,700	15 27	88
Huron	5,118,793	15 66	5,666,542	17 35	5,810,974	17 73	88
Bruce	4,063,579	14 77	4,503,176	17 03	4,576,073	17 05	87
Totals	11,438,427	14 86	12,997,937	17 08	12,916,747	16 96	88
Grey	4,989,740	14 24	5,292,891	15 12	5,864,752	16 37	87
Simcoe	4,458,036	15 07	4,532,888	15 33	5,002,355	17 00	89
Totals	9,447,776	14 62	9,825,779	15 22	10,867,107	16 66	88
Middlesex	4,444,041	14 96	4,779,496	15 68	4,997,310	16 63	90
Oxford	3,595,913	17 19	3,661,509	17 07	3,869,317	18 39	93
Brant	1,838,491	15 50	2,148,029	18 16	2,162,146	18 42	84
Perth	3,707,077	16 42	3,887,930	16 92	4,134,641	17 95	91
Wellington	5,552,854	19 25	5,357,069	18 52	5,833,603	20 25	95
Waterloo	2,861,595	17 65	2,980,529	18 33	3,172,602	19 70	90
Dufferin	1,691,712	14 21	1,870,421	15 18	1,901,642	15 72	90
Totals	23,691,683	16 68	24,684,983	17 11	26,071,261	18 25	91
Lincoln	1,421,364	13 86	1,677,842	16 66	1,627,440	15 87	87
Wentworth	2,086,595	14 62	2,663,893	19 18	2,553,359	18 15	81
Halton	1,465,697	13 90	1,897,311	17 97	1,832,572	17 26	81
Peel	2,259,641	14 34	2,731,383	17 37	2,707,256	17 23	83
York	4,436,703	15 30	4,754,722	16 10	5,072,526	17 27	89
Ontario	4,811,255	19 95	4,039,313	17 11	4,844,238	20 12	99
Durham	3,501,790	17 21	3,069,920	15 45	3,710,500	18 11	95
Northumberland	3,047,282	14 07	2,949,907	13 93	3,307,604	15 20	93
Prince Edward	1,593,615	11 98	1,660,201	12 92	1,702,989	12 95	93
Totals	24,623,942	15 46	25,444,492	16 18	27,358,484	17 15	90
Lennox and Addington	1,905,286	13 42	1,934,773	14 17	2,093,517	14 57	92
Frontenac	1,733,173	12 76	1,881,160	13 61	2,017,284	14 05	91
Leeds and Grenville	3,149,258	13 03	3,701,340	16 35	3,643,857	15 17	86
Dundas	1,293,310	15 16	1,489,950	17 28	1,459,162	16 94	89
Stormont	1,067,048	14 64	1,057,054	14 72	1,129,032	15 52	94
Glengarry	1,170,384	13 67	1,226,618	14 38	1,240,104	14 72	93
Prescott	1,261,773	14 97	957,089	11 20	1,107,655	13 28	113
Russell	639,213	12 82	622,030	12 04	676,673	13 56	95
Carleton	2,600,466	14 07	2,601,575	14 76	2,868,924	15 80	89
Renfrew	2,214,381	13 53	1,845,345	11 44	2,228,926	13 99	97
Lanark	2,012,528	13 57	2,237,570	15 17	2,259,266	15 56	87
Totals	19,046,820	13 66	19,554,504	14 31	20,724,400	14 91	92
Victoria	2,585,647	15 01	2,258,298	13 21	2,710,144	15 79	95
Peterborough	2,044,458	14 19	1,716,962	11 55	2,080,102	14 65	97
Haliburton	268,587	13 53	223,331	11 88	251,849	12 98	104
Hastings	2,972,119	13 20	2,848,333	13 83	3,239,411	14 25	93
Totals	7,870,811	14 02	7,046,924	12 94	8,281,506	14 78	95
Muskoka	578,038	14 53	498,300	13 40	556,864	14 80	98
Parry Sound	247,111	14 46	327,432	15 32	301,675	15 49	93
Algoma	334,988	13 68	367,013	14 98	436,658	17 11	80
Totals	1,160,137	14 26	1,192,745	14 36	1,295,197	15 68	91
The Province	110,764,626	15 00	115,742,923	15 78	121,964,930	16 53	91

Note.—The yearly average is obtained by the addition of the yearly average for two years of the seven crops in Table XXII to the yearly average for five years of the six crops in Table XIV.

VALUES—WOOL.

TABLE No. XXIV.—Showing by County Municipalities and groups of Counties the marketable value of the wool clip in Ontario in the years 1885 and 1886, with the yearly average for the two years 1885-6; also the average value of clip per fleece and the per cent. ratios of this average in 1886 to that of the two years 1885-6.

Counties.	1886.		1885.		Yearly Average for the two years 1885-6.		Per cent. ratios.
	Value.	Value per fleece.	Value.	Value per fleece.	Value.	Value per fleece.	
	$	$ c.	$	$ c.	$	$ c.	
Essex	18,287	1 08	14,887	96	16,587	1 02	106
Kent	21,612	1 08	23,481	1 01	22,546	1 04	104
Elgin	18,469	1 02	20,105	98	19,287	1 00	102
Norfolk	16,697	1 00	16,361	92	16,529	96	104
Haldimand	20,984	1 18	20,490	1 05	20,737	1 11	106
Welland	14,274	96	15,244	89	14,759	92	104
Totals	110,323	1 06	110,568	97	110,445	1 01	105
Lambton	24,409	1 13	25,710	1 01	25,060	1 07	106
Huron	50,560	1 05	52,489	98	51,524	1 01	104
Bruce	51,648	1 07	51,268	98	51,458	1 02	105
Totals	126,617	1 07	129,467	99	128,042	1 03	104
Grey	73,520	1 03	75,930	96	74,725	99	104
Simcoe	52,323	1 05	54,582	1 00	53,453	1 02	103
Totals	125,843	1 04	130,512	98	128,178	1 01	103
Middlesex	37,940	1 16	38,912	1 03	38,426	1 09	106
Oxford	19,029	1 09	20,662	99	19,845	1 04	105
Brant	14,830	1 06	16,551	1 02	15,690	1 04	102
Perth	34,530	1 07	33,534	99	34,032	1 03	104
Wellington	51,881	1 09	53,739	1 00	52,810	1 04	105
Waterloo	23,016	1 02	24,095	94	23,556	97	105
Dufferin	19,495	1 04	20,981	95	20,238	99	105
Totals	200,721	1 08	208,474	99	204,597	1 03	105
Lincoln	11,275	1 00	10,161	93	10,718	97	103
Wentworth	16,817	1 07	15,502	1 00	16,160	1 04	103
Halton	13,764	1 17	14,335	1 10	14,050	1 13	104
Peel	21,307	1 22	18,937	1 14	20,122	1 18	103
York	34,704	1 14	34,771	1 05	34,737	1 09	105
Ontario	33,838	1 16	31,579	1 09	32,709	1 13	103
Durham	24,092	1 10	23,054	1 05	23,573	1 07	103
Northumberland	22,657	1 07	24,166	99	23,411	1 03	104
Prince Edward	10,341	1 00	9,242	91	9,791	96	104
Totals	188,795	1 12	181,747	1 04	185,271	1 08	104
Lennox and Addington	19,101	99	15,275	93	17,188	96	103
Frontenac	19,471	95	18,854	91	19,162	93	102
Leeds and Grenville	37,051	92	36,723	88	36,887	90	102
Dundas	11,224	95	11,091	86	11,158	90	106
Stormont	9,862	96	9,633	87	9,747	91	105
Glengarry	14,921	91	14,694	81	14,808	86	106
Prescott	10,775	92	12,036	87	11,405	89	103
Russell	8,977	90	7,714	85	8,346	88	102
Carleton	30,560	96	24,932	89	27,746	93	103
Renfrew	32,383	86	29,390	76	30,886	81	106
Lanark	32,331	92	32,768	85	32,550	88	104
Totals	226,656	92	213,110	85	219,883	88	104
Victoria	23,018	1 05	23,575	95	23,297	1 00	105
Peterborough	16,758	1 00	19,458	93	18,108	96	104
Haliburton	2,445	92	4,056	84	3,250	87	106
Hastings	25,867	92	25,750	87	25,809	90	102
Totals	68,088	98	72,839	91	70,464	94	104
Muskoka	6,321	1 01	6,469	93	6,395	97	104
Parry Sound	2,267	1 02	2,590	95	2,428	98	104
Algoma	4,012	1 10	3,339	1 04	3,676	1 08	102
Totals	12,600	1 04	12,398	96	12,499	1 00	104
The Province	1,059,643	1 03	1,059,115	96	1,059,379	99	104

FARM WAGES.

TABLE No. XXV.—Showing by County Municipalities and groups of Counties the average Wages of Farm Laborers and Domestic Servants in Ontario in 1886, and for the five years 1882-6.

Counties.	Farm Laborers.								Domestics.	
	Per Year.				Per Month.				Per week, with board.	
	With board.		Without board.		With board.		Without board.			
	1886.	1882-6.	1886.	1882-6.	1886.	1882-6.	1886.	1882-6.	1886.	1882-6.
	$	$	$	$	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	148	160	258	254	16 42	17 73	27 75	27 41	1 57	1 59
Kent	159	175	254	269	17 24	18 61	26 33	27 37	1 60	1 55
Elgin	162	170	247	252	17 23	18 47	25 74	27 47	1 50	1 55
Norfolk	149	157	237	240	15 91	16 69	23 81	24 59	1 33	1 39
Haldimand	151	157	239	241	17 35	17 86	26 43	27 15	1 41	1 44
Welland	145	148	247	244	16 34	16 93	26 88	27 36	1 41	1 39
Group	154	162	248	251	16 84	17 93	26 10	26 89	1 46	1 49
Lambton	160	172	257	271	17 05	18 50	26 50	28 22	1 52	1 55
Huron	157	166	248	258	17 09	18 43	26 46	27 96	1 49	1 49
Bruce	154	163	248	254	17 25	18 51	26 77	27 73	1 46	1 45
Group	157	166	250	260	17 13	18 48	26 59	28 02	1 49	1 49
Grey	152	159	244	244	16 55	17 95	26 14	27 21	1 39	1 39
Simcoe	157	165	268	266	17 27	18 84	27 28	28 84	1 52	1 52
Group	155	162	257	256	16 91	18 48	26 80	28 12	1 44	1 44
Middlesex	159	169	255	252	17 02	19 02	26 57	27 83	1 56	1 57
Oxford	159	166	249	253	16 91	17 41	26 69	26 31	1 57	1 59
Brant	157	163	242	244	16 70	17 71	25 53	26 14	1 64	1 58
Perth	161	166	256	259	18 09	19 28	27 93	29 40	1 55	1 56
Wellington	160	165	262	260	16 65	17 90	26 45	27 70	1 55	1 54
Waterloo	153	156	260	251	16 96	17 75	26 88	26 63	1 42	1 47
Dufferin	151	156	249	253	17 19	18 08	26 42	28 18	1 55	1 46
Group	158	164	254	253	17 07	18 18	26 76	27 30	1 54	1 54
Lincoln	156	159	237	244	16 90	17 82	25 81	26 27	1 47	1 45
Wentworth	158	158	254	254	17 04	17 85	27 48	27 45	1 58	1 53
Halton	163	171	269	267	17 48	18 66	26 55	28 25	1 74	1 68
Peel	171	170	266	267	18 33	18 95	28 33	28 89	1 78	1 76
York	170	171	268	264	17 51	18 37	28 54	28 54	1 63	1 59
Ontario	163	169	256	266	16 31	18 35	25 78	28 42	1 53	1 50
Durham	165	166	242	248	16 39	17 40	25 95	26 43	1 61	1 57
Northumberland	158	158	245	248	16 80	17 29	25 60	26 16	1 54	1 53
Prince Edward	154	154	225	227	16 82	17 05	24 05	24 33	1 40	1 41
Group	163	165	248	253	17 12	18 05	26 65	27 23	1 59	1 56
Lennox & Add	161	158	256	241	16 50	17 20	26 16	26 50	1 48	1 54
Frontenac	160	155	269	251	16 80	18 12	27 14	27 20	1 55	1 47
Leeds & Gren	163	167	249	254	17 36	18 70	25 95	27 14	1 52	1 51
Dundas	157	159	249	236	18 04	17 81	27 30	28 19	1 64	1 68
Stormont	148	169	224	240	18 52	19 26	27 39	28 55	1 58	1 52
Glengarry	142	166	231	249	17 17	19 05	28 09	28 56	1 65	1 60
Prescott	148	167	244	265	17 22	19 50	26 45	28 78	1 38	1 42
Russell	156	173	239	255	17 00	19 34	27 17	27 93	1 35	1 36
Carleton	166	166	267	257	17 79	17 94	27 37	28 01	1 66	1 63
Renfrew	176	174	276	273	16 32	18 56	26 79	28 20	1 36	1 39
Lanark	171	177	270	271	17 79	19 08	27 71	27 93	1 64	1 66
Group	159	166	252	253	17 33	18 67	26 99	27 48	1 54	1 52
Victoria	167	169	245	255	16 60	18 41	25 94	27 91	1 53	1 57
Peterborough	172	173	260	264	17 09	19 03	27 14	28 00	1 60	1 58
Haliburton	158	167	260	266	17 35	18 91	27 46	29 20	1 19	1 31
Hastings	160	163	252	253	15 87	17 69	25 52	26 13	1 44	1 44
Group	165	168	252	257	16 56	18 43	26 28	27 55	1 50	1 52
Muskoka	149	171	253	279	17 74	19 81	27 38	29 82	1 49	1 48
Parry Sound	158	175	256	275	16 62	19 61	27 41	30 31	1 62	1 46
Algoma	150	177	255	280	17 50	21 19	27 56	31 30	1 50	1 52
Group	151	175	254	279	17 48	20 11	27 43	30 36	1 51	1 49
The Province	1886 158	165	251	255	17 06	18 24	26 64	27 63	1 52	1 52
	1885 160	...	253	...	17 32	...	27 18	...	1 51	...

LABOR AND WAGES.

TABLE No. XXVI.—Showing by occupations the average hours employed and wages earned for the week ending October 30, 1886, in 87 cities, towns and villages of Ontario, based on returns of 16,512 work-people collected from employers and of 2,744 collected from employés.

Occupations	Sex and age.	Average for week ending Oct. 30, 1886. Hours employed.	Wages.	Occupations.	Sex and age.	Average for week ending Oct. 30, 1886. Hours employed.	Wages.
			$ c.				$ c.
Agent	m.o.	49.33	15 50	Caulker	m.o.	39.33	8 40
Apprentice	"	56.75	3 80	Cellarman (brewery)	"	60.00	8 36
"	m.u.	55.97	3 06	Chair maker	"	62.56	8 77
Artist (lithographer)	m.o.	52.30	13 33	Cigar and tobacco factory operative:			
Ash gatherer	"	49.38	7 41	Assorter	f.o.	54.00	3 56
Axe maker	"	52.67	10 29	Cigar maker	"	49.91	5 98
Axle maker	"	58.75	9 75	"	m.o.	46.90	8 37
Baker	"	58.35	9 32	"	m.u.	52.80	3 80
Barber	"	67.94	9 04	Cigarette maker	m.o.	51.67	6 80
Beamer (tannery)	"	59.00	7 67	"	f.o.	36.14	2 80
Bell hanger	"	56.25	10 26	Roller	"	54.00	2 50
Bench hand (wood work)	"	59.20	8 33	"	m.o.	53.72	10 03
Bender (wheels)	"	59.88	8 15	Stemmer	"	54.00	8 00
Blacksmith	"	58.25	9 93	"	f.o.	51.14	2 45
" helper	"	54.28	6 60	Stripper	"	47.07	2 82
Boat builder	"	61.00	8 18	"	f.u.	51.20	2 29
Boiler maker	"	59.69	11 31	"	m.u.	49.23	2 74
" helper	"	59.36	7 64	Various	"	54.00	2 56
Bookbindery employé:				"	m.o.	59.00	8 53
Binder	"	57.24	10 50	"	f.o.	49.90	4 00
"	m.u.	57.20	2 28	Clerk (office)	"	52.68	4 59
"	f.o.	53.65	3 19	"	m.o.	59.21	9 88
"	f.u.	52.00	1 50	Coachman	"	84.00	8 00
Finisher	m.o.	56.50	14 22	Coffinmaker	"	51.43	9 14
Folder	f.o.	52.33	3 61	Collector	"	60.00	13 28
Forwarder	m.o.	56.82	12 21	Confectioner	"	60.00	7 32
Ruler	"	56.50	13 00	"	f.o.	54.80	3 18
Sewer	f.o.	58.00	3 20	Cooper	m.o.	56.50	9 68
"	f.u.	58.00	2 38	Coppersmith	"	65.00	10 73
Bookkeeper	m.o.	56.64	11 97	Core maker	"	57.69	6 58
"	f.o.	55.00	5 33	Corset maker	f.o.	50.00	4 91
Boot and shoe factory operative:				"	f.u.	50.00	2 50
Cutter	m.o.	59.67	10 17	Cotton mill operative:			
Finisher	"	59.50	8 00	Bleacher	m.o.	61.82	6 97
Fitter	"	54.00	6 75	Carder	"	60.94	6 81
"	f.o.	57.64	5 34	Card grinder	"	60.33	7 60
Hand sewer	m.o.	55.67	9 33	Card stripper	"	60.71	5 25
Heeler	"	54.50	7 75	"	m.u.	60 00	2 33
Laster	"	51.33	7 00	Card tender	"	60.50	2 98
Bottler	"	60.00	6 57	Doffer	"	59.29	2 46
"	m.u.	58.15	2 79	"	f.u.	58.82	2 33
"	f.o.	60.14	5 29	Doubler	f.o.	61.47	3 19
"	f.u.	50.00	2 50	Drawer in	"	59.79	4 19
Box maker (wood)	m.o.	50.55	8 34	"	f.u.	60.06	2 69
Brass finisher	"	59.57	11 65	"	m.o.	60.83	5 62
Brewer	"	61.52	11 77	"	m.u.	60.00	3 83
Bricklayer	"	50.84	13 84	Dresser	m.o.	60.64	8 91
Brick maker	"	51.73	8 22	Dyer	"	58.40	6 92
Bridge building employé	"	58.00	9 97	Finisher	"	61.90	7 49
Brush maker	"	49.33	8 26	"	f.o.	60.15	4 43
Buffer (plated ware)	"	64.33	10 68	Intermediate tender	"	56.36	5 14
Butcher	"	62.78	9 04	Lapper tender	m.o.	60.00	6 00
Cabinet maker	"	61.21	9 80	Loom fixer	"	60.00	11 00
Carpenter	"	57.38	9 61	Napper	"	60.50	6 30
Carpet weaver	"	59.50	8 53	Picker tender	"	60.17	5 89
"	f.o.	58.48	5 57	"	m.u.	59.21	3 49
Carriage trimmer	m.o.	56.81	9 72	Reeler	f.o.	61.07	3 76
Carver	"	52.85	11 62	"	f.u.	60.80	2 14

NOTE.—The initials in the second column stand for males and females over and under 16, respectively.

TABLE No. XXVI.—LABOR AND WAGES—*Continued.*

Occupations.	Sex and age.	Average for week ending Oct. 30, 1886. Hours employed.	Wages.
			$ c.
Cotton mill operative.—*Con.*			
Roll coverer	m.o.	60.75	9 44
Roving hand	f.o.	61.09	5 18
Section hand	m.o.	59.85	9 26
Slasher	"	53.33	7 67
Slubber	f.o.	59.90	5 63
Speeder	"	59.47	5 60
Spinner	"	59.74	3 34
"	f.u.	60.00	2 39
"	m.o.	60.20	6 22
"	m.u.	60.00	2 11
Spooler	f.o.	58.57	3 53
Twister	"	60.46	3 70
Warper	"	59.46	5 30
"	m.o.	62.50	14 00
Waste picker	f.o.	60.40	3 27
"	m.u.	62.43	2 29
Weaver	m.o.	59.40	7 18
"	f.o.	59.26	5 67
Web drawer	"	54.50	4 92
Winder	"	60.17	3 45
"	f.u.	61.87	2 58
"	m.o.	60.00	5 30
"	m.u.	60.00	2 25
Various n.e.s.	"	59.08	2 51
"	m.o.	60.77	6 91
"	f.o.	58.43	4 55
"	f.u.	62.09	2 30
Currier	m.o.	59.09	8 80
Cutter (tailor)	"	55.13	13 38
Decorator	"	53.17	12 06
Deliveryman	"	61.06	8 31
Derrick runner	"	60.00	17 50
" helper	"	60.00	10 91
Designer	"	59.50	14 69
Distillery employé	"	55.70	9 91
Dressmaker	f.o.	57.39	4 39
"	f.u.	64.47	1 40
Driller	m.o.	62.31	9 83
Editor	"	58.00	29 17
Electric light employé	"	55.00	10 30
Elevator man	"	60.20	5 60
Embosser	f.o.	49.00	3 17
Engineer (stationary)	m.o.	62.13	9 63
Engraver	"	58.03	12 40
Errand boy	"	58.40	4 02
"	m.u.	55.52	2 12
Fanning mill maker	m.o.	59.58	10 08
File maker	"	58.00	9 10
Finisher (iron)	"	53.38	9 74
" (wood)	"	63.33	7 93
Fireman	"	61.80	8 11
Fitter	"	61.68	11 23
Foreman:			
Baker	"	54.00	12 67
Blacksmith	"	58.75	15 28
Boilermaker	"	58.50	16 50
Carpenter	"	60.21	14 85
Cigar maker	"	53.50	14 38
Cotton mill	"	60.09	15 12
Fitter	"	57.83	14 62
Knitting mill	"	60.00	13 50
Lumber mill	"	61.20	18 80
Machinist	"	58.93	15 53
Miller	m.o.	63.50	13 27
Moulder	"	59.56	15 83
Painter	"	57.71	13 39
Paper mill	"	60.00	14 24
Printer	"	58.47	13 16
Railway shop	"	58.78	14 22
Woollen mill	"	60.22	13 11
Various n.e.s.	"	59.74	15 11
Forewoman	f.o.	56.30	7 93
Gardener	m.o.	60.09	8 32
Gas work employé	"	74.08	10 10
Gilder	"	55.75	7 99
Glass works employé:			
Blower	"	42.67	22 33
Gathering boy	"	47.89	9 71
Glass (ornamental) worker	"	55.00	9 33
Glove maker	"	56.67	8 83
"	f.o.	50.00	3 69
Gluer	m.o.	65.00	7 37
Grain buyer and weigher	"	53.80	9 55
Grinder	"	52.66	8 19
Harness maker	"	58.78	9 14
Hatter and furrier	"	55.22	13 71
"	f.o.	53.21	4 84
Hotel employé (with board):			
Bartender	m.o.	79.50	8 00
Bell boy	m.u.	78.00	2 33
Chambermaid	f.o.	69.00	1 89
Clerk	m.o.	71.60	7 65
Cook	f.o.	73.00	3 92
Kitchen girl	"	78.00	1 88
Laundress	"	52.50	2 94
Porter	m.o.	76.00	4 67
Stableman	"	72.00	5 67
Waiter	f.o.	70.50	2 06
Iron turner	m.o.	59.96	10 92
Japanner	"	59.67	9 45
Joiner	"	54.47	10 71
Kiln dryer	"	60.00	10 33
Knife (mower) maker	"	58.88	10 82
Knitting mill operative	"	59.52	8 00
" "	m.u.	63.00	3 10
" "	f.o.	52 98	3 35
" "	f.u.	56.34	1 36
Laborer	m.o.	58.45	7 18
Lamplighter	"	59.88	7 48
Last maker	"	55.00	8 62
Lathe hand	"	56.18	8 80
Lather	"	50.44	11 47
Locksmith	"	55.54	9 97
Lumber mill employé:			
Culler	"	61.50	8 63
Edger	"	61.09	7 80
Filer	"	62.09	10 24
Jointer	"	59.50	8 50
Measurer	"	61.50	8 03
Piler	"	62 53	7 67
Sawyer	"	60.19	7 95
Slabber	"	61.67	7 50
Machine hand	"	58.05	9 22
Machinist	"	59.62	9 83
Maltster	"	66.86	8 98
Marble cutter	"	57.56	10 86

TABLE No. XXVI.—LABOR AND WAGES—*Continued.*

Occupations.	Sex and age.	Average for week ending Oct. 30, 1886. Hours employed.	Wages.
			$ c.
Marble polisher	m.o.	56.33	7 75
Marine employé:			
Captain	"	60.56	18 86
Cook	f.o.	72.00	7 00
Cranesman (dredge)	m.o.	60.00	22 00
Deck hand	"	59.90	8 06
Engineer	"	.....	15 08
Mate	"	.....	13 90
Purser	"	.....	17 13
Sailor	"	73.11	10 79
Wheelman	"	.....	8 50
Mason (stone)	"	55.72	14 04
Melter	"	59.17	8 49
Miller	"	63.19	9 78
Milliner	f.o.	58.03	5 02
Millwright	m.o.	58.96	13 52
Miscellaneous	"	60.38	7 66
"	m.u.	59.97	3 36
"	f.o.	52.31	4 08
"	f.u.	51.31	2 08
Moulder	m.o.	57.33	12 05
Mounter (stoves)	"	65.94	10 76
Nut and bolt maker	"	58.00	8 68
Office boy	"	56.33	4 76
Ostrich feather worker	f.o.	57.23	3 22
Packer	"	54.33	3 00
"	m.o.	58.51	7 60
"	m.u.	58.43	2 93
Painter	m.o.	56.32	9 53
Paper hanger	"	57.75	10 85
Paper mill employé:			
Bag maker	f.o.	57.89	3 95
Bleacher	m.o.	60.00	7 50
Finisher	"	60.00	8 53
"	f.o.	60.00	3 75
Machine tender	m.o.	63.58	9 89
Pulp grinder	"	64.15	8 37
Rag cutter	"	60.00	8 10
Rag picker	f.o.	58.41	3 90
Various	"	67.85	3 95
"	m.o.	62.28	6 80
Pattern maker	"	59.31	12 14
Photographer	"	48.67	7 00
Piano and organ factory employé:			
Action maker	"	57.52	10 12
Bellows maker	"	55.40	10 20
Case maker	"	57.58	10 42
Finisher	"	56.22	10 70
Key maker	"	55.67	10 51
Polisher and varnisher	"	58.57	9 33
Sounding-board maker	"	58.55	10 95
Stringer	"	57.67	10 00
Tone regulator	"	60.50	17 12
Trimmer	"	57.10	8 88
Tuner	"	55.07	16 74
Various	"	58.69	8 96
Pile driver	"	60.00	9 00
Pin maker	"	52.00	14 08
Planer	"	61.76	9 59
Plasterer	"	53.90	13 02
Plumber	"	55.42	12 18
Polisher (metal)	"	68.34	12 06
Porter	m.o.	60.11	7 94
Potter	"	60.00	7 50
Press feeder	"	52.09	3 36
"	m.u.	54.76	2 27
Pressman	m.o.	56.16	9 57
Printer	"	57.37	9 98
Proof reader	"	58.22	8 67
Pump maker	"	55.00	7 98
Quarryman	"	57.57	9 28
Railway employé:			
Brakeman	"	64.31	9 79
Car builder	"	55.21	9 46
Car cleaner	f.o.	60.00	5 40
Car repairer	m.o.	60.00	9 84
Checker	"	66.00	7 68
Conductor	"	69.75	13 25
Engineer	"	62.44	18 25
Examiner or tapper	"	60.00	8 15
Fireman	"	64.33	10 27
Switchman	"	63.00	7 50
Wiper	"	74.88	8 07
Rattan worker	f.o.	59.00	3 25
Reporter	m.o.	61.47	12 94
Rivet boy	m.u.	55.25	3 84
Riveter	m.o.	58.00	9 30
Rolling mill employé	"	60.00	22 82
Rope maker	"	48.00	7 67
Route boy	"	12.00	1 62
Saddler	"	58.00	12 00
Safe maker	"	51.47	10 81
Salesman	"	57.89	9 27
Saleswoman	f.o.	61.70	4 85
Sash, door and blind maker	m.o.	59.18	9 45
Scale maker	"	55.73	9 06
Servant (with board)	f.o.	65.00	2 88
Shaper (furniture)	m.o.	59.67	9 45
Ship carpenter	"	50.50	10 01
Shipper	"	60.28	8 24
Shirtmaker	f.o.	54.06	4 89
Shoemaker	m.o.	58.13	8 94
Silverplater	"	60.01	11 20
"	f.o.	61.55	4 13
Soap maker	m.o.	61.38	7 92
Spoke maker	"	59.67	8 71
Spring maker and fitter	"	57.00	11 83
Stave factory employé	"	55.42	9 05
Stereotyper	"	41.38	10 00
Stone cutter	"	59.48	17 45
Straw goods employé	f.o.	54.53	5 31
Street railway employé:			
Conductor	m.o.	72.00	9 99
Driver	"	72.29	8 83
Stableman	"	70.65	8 45
Syrup factory employé	"	72.38	10 65
Tailor	"	58.82	9 75
Tailoress	f.o.	55.01	4 06
Tanner	m.o.	59.12	8 39
Teamster	"	57.97	7 42
Telegraph operator	"	66.00	9 95
Telephone operator	f.o.	54.00	4 00
Time keeper	m.o.	65.00	10 81
Tinsmith	"	59.70	10 00
Tool-maker	"	54·79	10 94

TABLE No. XXVI.—LABOR AND WAGES—*Continued.*

Occupations.	Sex and age.	Average for week ending Oct. 30, 1886. Hours employed.	Wages.
			$ c.
Transferrer (lithographer)	m.o.	55.00	11 44
Traveller	"	57.10	17 70
Trunk maker	"	51.19	9 74
Upholsterer	"	57.30	9 49
Varnisher	"	60.45	8 65
Vinegar maker	"	60.00	15 33
Vise hand	"	57.25	10 22
Wagon maker	"	59.87	10 25
Warehouseman	"	58.33	6 58
Washerwoman	f.o.	54.00	4 58
Watch case maker	m.o.	55.71	12 02
Watch maker and jeweller	"	54.11	9 80
" "	f.o.	54.60	4 00
Watchman	m.o.	67.24	7 96
Whip maker	"	58.33	10 21
"	f.o.	55.63	3 78
Wire worker	m.o.	60.33	8 16
Wood turner	"	59.13	9 36
Woollen mill employé :			
Assorter	"	55.55	7 86
Burler	f.o.	58.96	3 44
Card cleaner	m.o.	60.00	6 17
Carder	"	60.76	6 57
"	f.o.	59.47	3 41
Card helper	m.u.	59.98	3 08
Darner	f.o.	60.00	4 82
Drawer in	"	60.56	3 95
Dresser	"	59.73	4 42
Dyer	m.o.	59.76	10 63
" helper	"	59.82	6 16
Finisher	"	61.79	7 41
"	f.o.	57.84	4 62
"	m.u.	60.25	3 57
Fuller	m.o.	60.00	7 00
Loom fixer	"	58.78	8 75
Picker	"	60.47	6 11
Picker tender	m.u.	59.58	3 27
Woollen mill employé—*Con.*			
Piecer	m.o.	58.32	3 25
Reeler	f.o.	60.00	2 92
Scourer	m.o.	59.61	6 43
Shearer	f.o.	60.00	4 90
Specker	f.u.	59.68	2 99
Spinner	"	59.67	2 37
"	f.o.	60.00	3 43
"	m.o.	58.79	7 32
"	m.u.	59.62	2 67
Spooler	f.o.	60.00	3 12
"	f.u.	60.00	2 47
Twister	"	58.00	2 66
"	f.o.	57.63	3 08
Warper	"	60.00	3 80
"	m.o.	60.00	7 65
Weaver	"	58.89	6 41
"	f.o.	59.76	5 08
Winder	"	59.41	2 79
Various	"	57.34	4 09
"	f.u.	57.67	2 11
"	m.o.	59.38	6 00
"	m.u.	60.71	3 25
Yardman	m.o.	59.57	7 86
Average for all occupations.	m.o. 1886	58.86	9 00
	m.o. 1885	59.50	9 11
	m.u. 1886	55.85	2 92
	m.u. 1885	50.43	2 93
	f.o. 1886	55.90	4 37
	f.o. 1885	58.77	4 36
	f.u. 1886	57.70	2 26
	f.u. 1885	56.31	2 52
All classes	1886	58.28	7 98
	1885	58.79	7 92

LABOR AND WAGES.

TABLE No. XXVII.—Showing by occupations the comparative weekly averages of hours employed and wages earned at the principal industrial centres of Ontario in 1886, 1885 and 1884.

Occupation or Sub-Occupation.	Sex and age over or under 16.	Averages for one week in—					
		1886.		1885.		1884.	
		Hours employed.	Earnings.	Hours employed.	Earnings.	Hours employed.	Earnings.
			$ c.		$ c.		$ c.
Apprentice	m.o.	56.75	3 80	58.74	3 89	57.78	3 29
"	m.u.	55.97	3 06	59.38	2 90	59.56	3 19
Axe maker	m.o.	52.67	10 29	53.06	10 64	55.71	9 92
Axle maker	"	58.75	9 75	54.38	8 69	60.00	11 02
Baker	"	58.35	9 32	59.84	9 27	62.00	8 05
Barber	"	67.94	9 04	71.17	9 17	60.00	9 00
Beamer (tannery)	"	59.00	7 67	59.63	8 65	60.00	7 63
Bender (wheels)	"	59.88	8 15	64.00	7 79	60.00	9 00
Blacksmith	"	58.25	9 93	59.15	9 74	58.27	9 58
" (helper)	"	54.28	6 60	58.60	6 46	54.10	6 58
Boiler maker	"	59.69	11 31	56.55	11 07	56.13	10 79
" (helper)	"	59.36	7 64	59 58	7 41	.....	.....
Bookbinder	"	57.24	10 50	55.70	9 75	57.43	12 24
"	f.o.	53.65	3 19	60.00	3 08	57.94	3 41
Book-keeper	m.o.	56.64	11 97	57.95	12 77	57.00	11 83
"	f.o.	55.00	5 33	53.80	5 60	54.00	4 90
Boot and shoe factory operative:							
Cutter	m.o.	59.67	10 17	56.76	8 00	59.00	7 68
Finisher	"	59.50	8 00	56.56	10 57	59.00	7 80
"	f.o.	57.64	5 34	58.43	4 43	57.29	4 57
Laster	m.o.	51.33	7 00	56.44	9 04	58.55	7 15
Bottler	"	60.00	6 57	54.72	6 81	60.00	7 11
"	m.u.	58.15	2 79	57.29	2 99	60.00	3 08
Brass finisher	m.o.	59.57	11 65	58.59	8 60	60.00	9 86
Brewer	"	61.52	11 77	60.99	11 97	72.00	10 53
Bricklayer	"	50.84	13 84	57.15	14 81	58.89	14 87
Bridge building employé	"	58.00	9 97	58.64	10 77	60.00	7 59
Brush maker	"	49.33	8 26	55.79	9 63	.....	.....
Butcher	"	62.78	9 04	63.62	9 00	58.42	10 00
Cabinet maker	"	61.21	9 80	59.48	9 25	59.69	9 57
Carpenter	"	57.38	9 61	58.98	9 97	59.08	9 85
Carpet weaver	"	59.50	8 53	59.38	10 09	.....	.....
"	f.o.	58.48	5 57	60.00	5 12	.....	.....
Carriage trimmer	m.o.	56.81	9 72	58.62	11 03	58.67	10 15
Carver	"	52.85	11 62	58.28	11 40	59.60	10 44
Cellarman (brewery)	"	60.00	8 36	60.13	8 08	60.00	7 79
Chair maker	"	62.56	8 77	54.62	8 00	60.00	8 70
Cigar and tobacco factory operative:							
Cigar maker	m.o.	46.90	8 37	52.08	8 94	58.07	9 45
"	f.o.	49.91	5 98	57.36	3 70	59.72	3 72
"	m.u.	52.80	3 80	54.96	3 46	59.60	3 67
Stripper	f.o.	47.07	2 82	51.61	2 82	60.00	2 39
"	m.u.	49.23	2 74	54.27	2 11	60.00	2 05
Clerk (office)	m.o.	59.21	9 88	57.11	11 80	.....	.....
"	f.o.	52.68	4 59	59.00	4 00	.....	.....
Confectioner	m.o.	60.00	7 32	59.48	7 39	59.94	8 48
"	f.o.	54.80	3 18	58.85	2 61	60.00	2 44
Cooper	m.o.	56 50	9 68	59.99	9 48	60.05	9 01
Coppersmith	"	65.00	10 73	55.00	10 21	.....	.....
Core maker	"	57.69	6 58	58.00	5 59	58.76	6 80
Corset maker	f.o.	50.00	4 91	56.00	4 50	59.00	4 40

Note.—The weekly averages of hours and earnings in this Table for 1886 and 1885 are for the last full week of October, while those for 1884 are computed from returns for the last full week of April and October respectively. The initials in the second column stand for males and females over and under 16.

TABLE No. XXVII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and Age over or under 16.	Averages for one week in—					
		1886.		1885.		1884.	
		Hours employed.	Earnings.	Hours employed.	Earnings.	Hours employed.	Earnings.
			$ c.		$ c.		$ c.
Cotton mill operative :							
Carder	m.o.	60.94	6 81	58.75	6 30	59.55	8 26
Card grinder	"	60.33	7 60	62.10	8 89	60.00	8 58
Card stripper	"	60.71	5 25	62.12	5 51	59.40	6 48
Doffer	m.u.	59 29	2 46	60.00	1 81	60.00	1 98
Drawer in	f.o.	59.79	4 19	59.52	4 12	60.50	4 18
Dresser	m.o.	60.64	8 91	62.50	11 07	60.00	8 97
Dyer	"	58.40	6 92	63.66	7 28	59.91	7 35
Finisher	"	61.90	7 49	64.13	7 00	60.00	7 35
"	f.o.	60.15	4 43	61.81	4 58	60.00	4 71
Intermediate tender	"	56.36	5 14	60.33	4 89	60.00	4 22
Loom fixer	m.o.	60.00	11 00	61.03	8 57	59.46	10 71
Picker tender	"	60.17	5 89	62.50	6 02	60.00	6 05
Reeler	f.o.	61.07	3 76	60.08	3 36	60.00	3 49
Roving hand	"	61.09	5 18	56.78	3 96	60.00	4 67
Section hand	m.o.	59.85	9 26	60.37	9 29	60.00	9 47
Slasher	"	53.33	7 67	62.57	10 67	58.33	9 85
Slubber	f.o.	59.90	5 63	57.64	4 94	60.00	4 33
Speeder	"	59.47	5 60	60.90	5 44	60.00	4 64
Spinner	"	59.74	3 34	59.91	4 36	59.85	4 55
"	f.u.	60.00	2 39	49.76	2 18	60.00	2 77
"	m.o.	60.20	6 22	54.94	6 19	59.45	7 69
Spooler	f.o.	58.57	3 53	60.80	3 30	.....	.....
Twister	"	60.46	3 70	53.33	2 97	60.00	3 52
Warper	"	59.46	5 30	60.44	4 58	59.57	4 39
Waste picker	"	60.40	3 27	60.30	3 20	60.00	3 12
Weaver	m.o.	59.40	7 18	60.36	9 17	59.42	6 72
"	f.o.	59.26	5 67	60.30	5 86	58.88	5 93
Web drawer	"	54.50	4 92	61.76	4 16	59.51	6 03
Winder	f.o.	60.17	3 45	60.21	2 87	58.31	3 60
Currier	m.o.	59.09	8 80	58.59	8 73	59.83	8 13
Cutter (tailor)	"	55.13	13 38	58.91	18 17	.....	.....
Deliveryman	"	61.06	8 31	60.12	8 02	60.00	8 49
Distillery employé	"	55.70	9 91	59.67	11 58	60.00	11 71
Dressmaker	f.o.	57.39	4 39	56.26	4 60	59.80	4 35
Engineer (stationary)	m.o.	62.13	9 63	61.94	9 43	60.78	9 56
Engraver	"	58.03	12 40	57.25	10 19	54.00	10 77
Fanning mill maker	"	59.58	10 08	59.96	8 52	60.00	9 50
File maker	"	58.00	9 10	57.00	9 00	.....	.....
Finisher (wood)	"	63.33	7 93	59.18	8 69	58.81	9 05
Fireman	"	61.80	8 11	61.32	8 39	66.49	9 08
Fitter	"	61.68	11 23	60.54	10 98	58.22	10 22
Foreman :							
Baker	"	54.00	12 67	60.00	9 50	.....	.....
Blacksmith	"	58.75	15 28	60.00	12 00	.....	.....
Carpenter	"	60.21	14 85	57.75	13 11	.....	.....
Cotton mill	"	60.09	15 12	61 24	15 82	60.00	13 27
Knitting mill	"	60.00	13 50	62 89	14 73	.....	.....
Lumber mill	"	61.20	18 80	65 00	18 66	60.00	21 26
Machinist	"	58.93	15 53	59 67	14 00	.....	.....
Miller	"	63 50	13 27	60 00	12 25	.....	.....
Moulder	"	59.56	15 83	58 71	14 21	.....	.....
Paper mill	"	60.00	14 24	60 00	12 62	.....	.....
Printer	"	58.47	13 16	59 09	12 45	.....	.....
Railway shop	"	58.78	14 22	64 37	11 49	59.67	15 11
Woollen mill	"	60 22	13 11	60 91	14 08	60.00	13 08
Various, n. e. s.	"	59.74	15 11	58 62	15 65	59.76	15 98
Forewoman	f.o.	56.30	7 93	58 00	7 67	.....	.....
Gas works employé	m.o.	74.08	10 10	60 64	8 24	60.00	9 70

TABLE No. XXVII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and age over or under 16.	Averages for one week in—					
		1886.		1885.		1884.	
		Hours employed.	Earnings.	Hours employed.	Earnings.	Hours employed.	Earnings.
			$ c.		$ c.		$ c.
Glass blower	m.o.	42.67	22 33	49 71	22 39	48.02	22 52
Glove maker	"	56.67	8 83	58 79	9 71	60.00	11 43
"	f.o.	50.00	3 69	62 64	3 97	60.00	4 95
Grinder	m.o.	52.66	8 19	57 19	9 88	55.82	10 98
Harness maker	"	58.78	9 14	59 27	8 66	58.77	8 91
Hatter and furrier	"	55.22	13.71	57 90	10 22	57.97	12 19
"	f.o.	53.21	4.84	56 71	4 41	58.97	3 85
Hotel employé (with board):							
Bartender	f.o.	79.50	8 00	73.23	6 58	72.00	6 39
Bell boy	m.u.	78.00	2 33	73.20	2 00	72.00	1 80
Chambermaid	f.o.	69.00	1 89	72.50	2 12	62.00	2 17
Clerk	m.o.	71.60	7 65	73.71	7 21	72.00	6 66
Cook	f.o.	73.00	3 92	70.83	5 29	72.00	4 82
Kitchen girl	"	78.00	1 80	74.57	2 03	72.00	2 14
Laundress	"	52.50	2 94	73.38	2 23	72.00	2 15
Porter	m.o.	76.00	4 67	72.62	3 66	72.00	3 56
Stableman	"	72.00	5 67	72.86	3 18	72.00	3 25
Waiter	f.o.	70.50	2 06	73.86	2 15	70.94	2 29
Japanner	m.o.	59.67	9 45	60.91	9 63	60.00	9 41
Knife (mower) maker	"	58.88	10 82	60.00	11 25	60.00	7 73
Knitting mill operative	"	59.52	8 00	60.42	7 61	59.01	7 12
" "	m.u.	63.00	3 10	61.48	3 85	59.00	2 66
" "	f.o.	52.98	3 35	61.43	3 81	59.00	2 93
" "	f.u.	56.34	1 36	61.87	2 70	59.00	2 00
Laborer	m.o.	58.45	7 18	60.81	7 05	58.56	6 79
Lamplighter	"	59.88	7 48	60.64	8 24	61.64	7 62
Lather	"	50.44	11 47	59.75	9 75	56.71	10 27
Locksmith	"	55.54	9 97	57.67	9 33	60.00	12 00
Lumber mill employé:							
Culler	"	61.50	8 63	66.26	8 85	66.22	9 14
Edger	"	61.09	7 80	67.50	9 00	72.00	9 00
Filer	"	62.09	10 24	66.24	11 39	65.01	10 21
Jointer	"	59.50	8 50	61.33	8 50	54.00	9 75
Measurer	"	61.50	8 03	67.14	7 86	65.68	8 68
Piler	"	62.53	7 67	63.41	7 84	.....	.....
Sawyer	"	60.19	7 95	64.10	9 26	59.85	8 92
Slabber	"	61.67	7 50	67.09	8 27	72.00	8 75
Machine hand	"	58.05	9 22	59.20	9 15	58.55	9 58
Machinist	"	59.62	9 83	59.14	10 16	59.25	9 96
Maltster	"	66.86	8 98	70.03	8 57	64.00	8 35
Marble cutter	"	57.56	10 86	59.38	9 83	58.82	9 84
" polisher	"	56.33	7 75	59.39	7 28	59.00	7 37
Mason (stone)	"	55.72	14 04	56.76	12 58	58.77	14 38
Melter	"	59.17	8 49	58.50	8 69	57.00	8 58
Miller	"	63.19	9 78	64.28	9 81	66.00	10 98
Milliner	f.o.	58.03	5 02	57.20	5 17	59.18	7 03
Millwright	m.o.	58.96	13 52	60.81	11 30	60.17	12 22
Moulder	"	57.33	12 05	59.15	11 76	58.80	11 58
Mounter (stove)	"	65.94	10 76	63.58	10 16	58.83	10 60
Packer	f.o.	54.33	3 00	52.01	2 84	59.33	3 19
"	m.o.	58.51	7 60	59.79	7 69	57.00	8 57
Painter	"	56.32	9 53	57.29	9 54	58.94	9 58
Paper hanger and glazier	"	57.75	10 85	57.00	10 20	56.50	8 50
Paper mill employé:							
Bag maker	f.o.	57.89	3 95	56.43	3 86	57.17	3 62
Bleacher	m.o.	60.00	7 50	60.00	7 00	59.00	5 75
Finisher	"	60.00	8 53	60.00	8 33	59.00	6 98
"	f.o.	60.00	3 75	60.00	3 97	58.60	4 73
Machine tender	m.o.	63.58	9 89	60.00	10 46	59.00	12 06
Rag cutter	"	60.00	8 10	60.00	8 47	58.00	8 79
Rag picker	f.o.	58.41	3 90	59.79	4 26	58.00	4 00

TABLE No. XXVII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and age over or under 16.	Averages for one week in—					
		1886.		1885.		1884.	
		Hours employed.	Earnings.	Hours employed.	Earnings.	Hours employed.	Earnings.
			$ c.		$ c.		$ c.
Pattern maker	m.o.	59.31	12 14	58.62	11 11	58.99	11 42
Piano & organ factory employé:							
Action maker	"	57.52	10 12	58.27	10 10	58.00	9 00
Case maker	"	57.58	10 42	57.70	11 18	59.00	10 19
Finisher	"	56.22	10 70	59.20	13 30	60.00	11 12
Polisher and varnisher	"	58.57	9 33	59.00	8 60	59.50	10 27
Trimmer	"	57.10	8 88	59.80	9 72	58.00	9 50
Tuner	"	55.07	16 74	58.00	17 00	59.00	10 32
Planer	"	61.76	9 59	57.20	7 96	54.00	7 29
Plasterer	"	53.90	13 02	58.64	14 40	60.33	13 31
Plumber	"	55.42	12 18	59.95	10 91	60.00	10 84
Polisher (metal)	"	68.34	12 06	62.04	11 58	60.63	10 40
Potter	"	60.00	7 50	58.63	8 75	60.60	10 07
Press feeder	"	52.09	3 36	57.11	5 00	.....	.....
Pressman	"	56.16	9 57	58.79	9 48	62.40	10 00
Printer	"	57.37	9 98	55.95	8 51	58.33	9 37
Pump maker		55.00	7 98	57.83	7 96	60.00	10 50
Railway employé:	"						
Brakesman	"	64.31	9 79	63.52	8 02	68.36	8 81
Car builder	"	55.21	9 46	53.60	8 53	57.09	9 87
Car repairer	"	60.00	9 84	58.63	9 84	59.67	10 17
Checker	"	66.00	7 68	65.00	6 80	60.00	9 20
Conductor	"	69.75	13 25	60.69	11 32	64.58	14 32
Engineer	"	62.44	18 25	60.51	20 34	66.13	18 32
Fireman	"	64.33	10 27	60.00	10 83	65.09	9 88
Switchman	"	63.00	7 50	81.87	10 09	60.00	7 52
Wiper	"	74.88	8 07	60.79	7 27	59.63	7 48
Reporter	"	61.47	12 94	56.88	12 11	60.09	14 17
Riveter	"	58.00	9 30	56.36	8 58	51.93	9 53
Saddler	"	58.00	12 00	52.50	7 50	58.50	8 63
Safe maker	"	51.47	10 81	59.33	10 99	59.00	9 87
Salesman	"	57.89	9 27	59.92	9 64	60.71	9 20
Saleswoman	f.o.	61.70	4 85	59.43	6 13	58.88	3 78
Sash, door and blind maker	m.o.	59.18	9 45	60.00	10 00	59.00	10 83
Servant (with board)	f.o.	65.00	2 88	70.33	2 83	.....	.....
Ship carpenter	"	50.50	10 01	59.96	8 80	58.00	8 87
Shipper	"	60.28	8 24	62.22	7 22	60.00	8 14
Shirt maker	f.o.	54.06	4 89	51.00	4 12	60.00	3 88
Shoemaker	m.o.	58.13	8 94	59.40	7 97	57.92	8 54
Silver plater	"	60.01	11 20	60.00	10 43	57.00	10 87
Soap maker	"	61.38	7 92	59.04	7 43	59.00	6 96
Spoke maker	"	59.67	8 71	63.65	9 17	60.00	8 42
Spring maker and fitter	"	57.00	11 83	52.25	10 81	.....	.....
Stereotyper	"	41.38	10 00	36.00	8 00	.....	.....
Stone cutter	"	59.48	17 45	57.41	12 90	59.50	14 41
Street railway employé:							
Driver	"	72.29	8 83	75.42	7 56	.....	.....
Stableman	"	70.65	8 45	69.33	8 17	.....	.....
Tailor	"	58.82	9 75	59.63	10 16	59.70	9 62
Tailoress	f.o.	55.01	4 06	57.84	4 46	54.39	4 00
Tanner	m.o.	59.12	8 39	59.69	7 95	59.92	7 80
Teamster	"	57.97	7 42	60.83	7 34	63.26	7 10
Telegraph operator	"	66.00	9 95	68.00	9 87	60.20	9 55
Telephone operator	f.o.	54.00	4 00	54.00	4 25	.....	.....
Tinsmith	m.o.	59.70	10 00	60.17	9 20	59.65	8 84
Toolmaker	"	54.79	10 94	50.80	7 31	59.00	12 06
Traveller	"	57.10	17 70	59.14	15 85	.....	.....
Upholsterer	"	57.30	9 49	57.53	10 15	52.58	9 75
Varnisher	"	60.45	8 65	53.60	8 17	57.63	7 85

TABLE No. XXVII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and age over or under 16.	Averages for one week in—					
		1886.		1885.		1884.	
		Hours employed.	Earnings.	Hours employed.	Earnings.	Hours employed.	Earnings.
			$ c.		$ c.		$ c.
Wagon maker	m.o.	59.87	10 25	57.43	9 21	59.90	10 37
Watchmaker and jeweller	"	54.11	9 80	56.18	9 56	58.50	9 82
Watchman	"	67.24	7 96	66.44	7 46	69.94	8 30
Whip maker	"	58.33	10 21	52.00	7 46	60.00	7 20
"	f.o.	55.63	3 78	56.00	3 83	60.00	3 40
Wire worker	m.o.	60.33	8 16	60.00	7 25	60.00	9 00
Wood turner	"	59.13	9 36	57.60	9 46	52.57	7 99
Woollen mill employé:							
Assorter	"	55.55	7 86	59.67	7 35	.....	.....
Burler	f.o.	58.96	3 44	60.78	3 97	62.50	3 67
Card cleaner	m.o.	60.00	6 17	60.00	6 11	62.57	5 25
Carder	"	60.76	6 57	59.30	7 46	59.97	6 95
Card helper	m.u.	59.98	3 08	60.00	3 43	.....	.....
Darner	f.o.	60.00	4 82	61.71	4 89	64.50	4 28
Drawer in	"	60.56	3 95	60.60	3 99	60.67	3 82
Dresser	"	59.73	4 42	60.00	4 60	60.00	3 77
Dyer	m.o.	59.76	10 63	59.19	7 03	59.81	7 42
Finisher	"	61.79	7 41	60.07	7 14	60.08	6 96
"	f.o.	57.84	4 62	60.00	3 38	60.00	4 18
"	m.u.	60.25	3 57	60.00	3 90	60.00	3 33
Fuller	m.o.	60.00	7 00	60.50	7 20	59.90	6 57
Loom fixer	"	58.78	8 75	61.50	8 93	60.55	10 01
Picker	"	60.47	6 11	59.82	6 07	.....	.....
Picker tender	m.u.	59.58	3 27	59.83	2 70	.....	.....
Piecer	"	58.32	3 25	60.00	2 91	60.00	2 85
Scourer	m.o.	59.61	6 43	61.06	6 42	63.00	7 32
Shearer	f.o.	60.00	4 90	63.00	4 27	64.00	4 70
Spinner	f.u.	59.67	2 37	63.00	2 60	.....	.....
"	f.o.	60.00	3 43	61.80	3 10	.....	.....
"	m.o.	58.79	7 32	60.48	7 90	59.95	8 17
"	m.u.	59.62	2 67	61.03	2 87	.....	.....
Spooler	f.o.	60.00	3 12	60.17	2 97	60.00	2 92
Warper	m.o.	60.00	7 65	60.56	7 33	.....	.....
"	f.o.	60.00	3 80	61.71	4 10	60.00	4 72
Weaver	"	59.76	5 08	60.39	4 61	60.21	4 59
"	m.o.	58.89	6 41	61.80	7 70	60.00	6 00
Yardman	"	59.57	7 86	59.00	7 50	60.00	8 73

LABOR AND WAGES.

TABLE No. XXVIII.—Showing by occupations the averages of time employed, yearly earnings and cost of living in Almonte, Belleville, Brockville, Chatham, Dundas, Galt, Gananoque, Guelph, Hamilton, Hespeler (Elora and Preston), Kingston, London, Oshawa, Ottawa, Peterborough, St. Catharines (Thorold and Merritton), St. Thomas, Stratford, Toronto and Woodstock, for the year ending October 30, 1886, based on returns collected from 2,684 workpeople.

Occupation or Sub-Occupation.	Sex and age, over or under 16.	No. of dependents.		Time employed.		Yearly earnings.				Cost of living.		
		Total.	Under 16.	Hours per week.	Days in year.	Wages from occupation.	Extra.	Wife and minor children.	Total.	Total.	Per capita.	
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
Agricultural hand implement worker:												
Blacksmith	m.o.	2.33	1.33	56.33	217.67	348 54	2 00	.....	350 54	399 33	119	80
Grinder	"	6.50	5.00	57.50	222.00	365 63	17 50	2 00	385 13	403 50	53	80
Polisher	"	3.14	2.14	55.29	244.57	396 43	5 00	.....	401 43	370 14	89	34
Various	"	2.00	0.33	56.00	238.67	397 33	21 33	.....	418 66	395 66	131	89
Agricultural implement worker:												
Blacksmith	"	3.20	2 07	59.90	229.67	334 49	26 53	13 53	374 55	336 47	80	11
Machinist	"	3.71	2.65	58.76	262.29	405 71	7 29	.....	413 00	381 18	81	60
Moulder	"	2.00	1.18	56.95	252.73	467 57	3 64	.....	471 21	368 78	122	93
Painter	"	2.80	2.00	57.00	161.60	256 00	26 80	....	282 80	253 80	66	79
Woodworker	"	2.70	2.00	58.05	273.60	406 20	17 50	....	423 70	362 00	97	84
Various	"	5.67	4.00	59.83	258.33	257 33	20 00	.....	277 33	323 67	48	55
Apprentice (various)	"	.....	.....	59.23	294.59	173 90	4 50	.....	178 44	175 36	175	36
" "	m.u.	.....	.....	60.00	270.33	152 17	.....	.....	152 17	146 83	146	83
" "	f.o.	.....	.....	57.00	282.00	82 38	.....	.....	82 38	100 00	100	00
Axe maker	m.o.	4.83	3.17	54 00	283.67	445 17	6 67	8 33	460 17	437 50	75	00
Axle maker	"	4.50	3.00	58.75	306.00	493 50	.....	.....	493 50	320 00	58	18
Baker	"	3.33	2.44	61.39	302.33	407 97	1 67	.....	409 64	368 06	84	94
Barber	"	1.26	0.74	67.95	310 66	456 87	3 24	1 97	462 08	408 40	180	45
Bell hanger	"	4.50	3.50	60.00	310.50	548 00	.....	52 00	600 00	509 50	109	00
Bicycle maker	"	0.50	..	60.00	265.00	362 50	.....	.....	362 50	299 00	199	33
Blacksmith (general)	"	2.46	1.65	59.69	283.62	432 25	5 65	3 85	441 75	382 33	110	45
" helper	"	2.00	1.00	57 67	284.00	333 33	..	.....	333 33	315 00	105	00
Boat builder	"	2.95	1.95	60.63	292.68	356 42	9 00	3 68	369 10	326 74	82	77
Boiler maker	"	2.75	1.75	58.50	247.50	450 75	4 75	58 75	514 25	424 75	113	27
" helper	"	3.00	2.00	59.00	260.00	365 67	.....	.....	365 67	355 67	88	92
Bookbinder	"	2.17	1.17	53.67	259.17	455 50	..	8 33	463 83	388 67	122	74
Bookkeeper	"	2.00	1.47	56.24	298.59	519 62	16 18	.....	535 80	467 00	155	67
Boot and shoe factory operative:												
Cutter	"	1.00	0.33	59.33	291.67	452 67	8 33	....	461 00	377 67	188	83
Finisher	"	...	...	59.50	282.50	370 95	.....	.....	370 95	364 00	364	00
Fitter	"	3.75	2.00	56.50	268.00	371 00	.....	100 00	471 00	484 75	102	05
"	f.o.	.....	.....	54.33	262.33	194 44	.....	....	194 44	163 67	163	67
Hand sewer	m.o.	3.00	1.33	55.67	266 00	379 00	5 00	1 67	385 67	312 00	78	00
Heeler	"	5.25	3.25	54.50	289.50	351 25	12 50	180 00	543 75	415 50	66	48
Laster	"	2.33	1.67	51.33	236.67	336 00	.....	....	336 00	316 67	95	00
Various	"	2.00	1 43	55.14	284.36	358 50	7 14	.....	265 64	350 29	116	76
"	f.o.	.....	.....	53 00	242.00	125 05	.....	.....	125 05	118 40	118	40
"	m.u.	.....	.....	53.00	294.00	117 00	.....	.....	117 00	117 00	117	00
"	f.u.	.....	.....	53.00	312 00	65 00	.....	.....	65 00	65 00	65	00
Box maker (wood)	m.o.	2.25	1.40	47.60	272.90	402 76	6 75	14 84	424 35	408 67	125	74
Brass finisher	"	0.50	....	60.00	275.00	510 00	.....	.....	510 00	409 00	272	67
Brewery employé:												
Bottler	f.o.	.....	.....	60.14	300.00	203 57	11 72	....	215 29	166 86	166	86
Brewer	m.o.	3.67	2.33	60.00	306 00	442 50	.....	57 33	499 83	437 00	100	79
Maltster	"	1.00	0.75	69.00	322.25	448 50	.....	.....	448 50	384 75	192	38
Various	"	5.00	2.67	59.67	308.00	312 33	.....	78 33	390 66	349 66	58	28
Bricklayer	"	2.11	1.49	52.09	199.97	507 28	2 97	2 03	512 28	399 38	128	51
Brickmaker	"	3.80	1.60	59.60	213.40	321 40	60 00	65 60	446 40	412 00	85	83
Brushmaker	"	3.25	2.25	51.25	284.00	441 00	.....	.....	441 00	448 88	105	62
Butcher	"	0.78	0.33	61.00	308.00	374 89	.....	.....	374 89	295 11	166	00
Carpenter (general)	"	2.70	1.65	56.35	263.58	395 70	18 32	6 49	420 51	355 59	96	07
Carriage worker:												
Blacksmith	"	2.67	1.67	59.60	280.53	449 30	4 12	20 00	473 42	395 00	107	73
Painter	"	2.80	2.00	59.60	264.80	422 80	11 20	5 50	439 50	368 40	96	95
Trimmer	"	2.00	1.00	55.58	249.08	446 17	2 08	.....	448 25	310 83	103	61
Woodworker	"	2.79	1.64	59.71	274.64	415 36	11 78	.....	427 14	343 43	90	72
Various	"	2.47	1.73	58.60	268.33	425 00	7 00	.....	432 00	368 53	106	31

TABLE No. XXVIII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and age, over or under 16.	No. of dependents. Total.	No. of dependents. Under 16.	Time employed. Hours per week.	Time employed. Days in year.	Yearly earnings. Wages from occupation.	Yearly earnings. Extra.	Yearly earnings. Wife and minor children.	Yearly earnings. Total.	Cost of living. Total.	Cost of living. Per capita.
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Cigar factory operative:											
Cigarmaker	m.o.	0.91	0.52	46.91	240.83	314 13	1 50	3 53	319 16	305 33	160 17
"	f.o.	....	....	48.25	296.50	337 50	.....	.....	337 50	287 50	287 50
"	m.u.	...	...	52.00	266.67	183 33	.....	.....	183 33	183 33	183 33
Roller	m.o.	2.03	1.48	55.00	220.38	401 95	.....	.....	401 95	363 32	119 73
Stripper	m.u.	....	....	54.00	250.00	91 75	....	.....	91 75	91 75	91 75
"	f.u.	....	....	60.00	275.00	137 50	.....	.....	137 50	137 50	137 50
Various	m.o.	2.40	2.00	52.00	264.00	307 00	15 50	.....	322 50	290 00	82 86
"	f.o.	....	....	60.00	300.00	250 00	.....	.....	250 00	233 33	233 33
"	m.u.	....	....	54.00	302.50	178 00	7 50	.....	185 50	185 50	185 50
"	f.u.	....	....	60.00	300.00	166 67	.....	.....	166 67	166 67	166 67
Clerk (office)	m.o.	2.79	1.36	61.14	308.79	423 57	1 00	19 29	443 86	410 36	108 40
"	f.o.	....	....	50.40	247.60	152 80	.....	.....	152 80	179 80	179 80
Coachman	m.o.	2.33	1.33	83.33	365.00	416 00	.....	34 67	450 67	419 00	125 70
Coffin maker	"	....	....	51.43	271.43	482 29	.....	.....	482 29	331 00	331 00
Confectioner	"	3.00	2.50	60.00	276.00	475 00	.....	.....	475 00	496 00	124 00
"	f.o.	....	....	60.00	307.20	168 40	5 43	.....	173 83	172 40	172 40
Cooper	m.o.	3.24	1.71	58.57	268.10	366 87	15 95	3 57	386 39	358 64	84 62
Cotton mill operative:											
Carder	m.o.	2.00	1.50	60.50	268.50	459 90	.....	.....	459 90	375 00	125 00
Dyer	"	3.50	1.50	59.00	275.50	306 77	.....	.....	306 77	306 00	68 00
Speeder	f.o.	....	....	60.00	250.00	168 00	.....	.....	168 00	150 00	150 00
Spinner	m.o.	1.33	1.00	60.00	250.00	370 83	.....	.....	370 83	362 50	155 36
"	f.o.	....	....	60.00	240.00	121 67	.....	.....	121 67	115 33	115 33
Weaver	m.o.	1.20	0.60	61.80	301.20	364 00	.....	.....	364 00	268 73	122 15
"	f.o.	1.25	0.75	60.00	277.50	196 75	.....	15 75	212 50	248 50	110 44
Various	m.o.	3.40	2.20	60.40	245.20	299 32	.....	51 60	350 92	353 40	80 32
"	f.o.	0.14	....	60.29	261.14	166 55	.....	.....	166 55	149 57	130 88
"	m.u.	....	....	60.00	150.00	75 00	.....	.....	75 00	75 00	75 00
Draughtsman	m.o.	1.00	..	60.00	285.50	822 50	.....	.....	822 50	516 50	258 25
Dressmaker	f.o.	0.04	0.04	57.31	300.33	213 75	10 21	.. ...	223 96	151 04	145 00
Engineer (stationary)	m.o.	3.72	2.21	64.64	295.17	447 86	6 27	14 66	468 79	409 74	86 73
Fanning mill maker	"	2.00	1.33	59.42	280.50	445 83	.....	.....	445 83	346 17	115 39
File maker	"	3.50	2.50	58.00	284.00	420 50	.....	... ..	420 50	405 50	90 11
Fireman (general)	"	2.25	1.63	58.75	256.13	284 18	2 25	12 50	298 93	276 93	85 21
Foreman:											
Cabinetmaker	"	3.00	1.50	60.00	278.25	559 44	.....	40 00	599 44	516 75	129 19
Carpenter	"	3.67	1.67	59.67	304.00	618 00	.....	.....	618 00	459 67	98 50
Machinist	"	4.60	3.00	59.00	287.80	707 94	46 40	.....	754 34	559 60	99 93
Miller	"	3.67	2.00	60.00	305.00	640 67	.....	32 00	672 67	489 00	104 79
Printer	"	3.25	2.00	60.88	306.25	616 22	0 31	6 50	623 03	601 59	141 55
Woollen mill	"	4.20	2.80	60.00	297.40	588 40	.....	.....	588 40	495 40	95 27
Various	"	4.00	2.46	59.65	289.27	589 25	7 92	19 23	616 40	529 57	105 91
Forewoman	f.o.	....	....	54.00	309.50	256 00	26 00	.....	282 00	225 00	225 00
Foundry machine shop employé:											
Blacksmith	m.o.	3.63	2.50	59.88	300.25	525 38	.....	18 75	544 13	438 88	94 89
" helper	"	1.33	0.67	59.33	287.67	316 67	.....	....	316 67	308 33	132 14
Machinist	"	2.75	1.78	58.63	270.53	449 77	12 27	18 81	480 85	401 64	107 10
Melter	"	6.00	4.00	60.00	300.00	350 00	.....	100 00	450 00	425 00	60 71
Moulder	"	2.98	1.82	56.23	255.31	481 82	4 84	1 77	488 43	455 67	114 48
Woodworker	"	1.67	0.83	58.67	267.50	396 83	1 67	25 00	423 50	340 00	127 50
Various	"	3.68	2.36	59.20	278.24	340 10	1 20	19 60	360 90	337 02	72 01
Furniture factory employé:											
Cabinetmaker	"	2.54	1.72	59.82	278.26	409 33	2 03	7 69	419 05	365 17	103 20
Chair maker	"	2.08	1.23	59.08	280.69	404 41	14 92	.....	419 33	362 46	117 80
Finisher	"	1.86	1.21	59.00	284.07	389 77	8 92	12 50	411 19	393 79	137 83
Machine hand	"	2.43	1.57	57.29	283.71	397 38	8 71	.....	406 09	386 91	112 85
Pattern maker	"	2.33	1.33	59.33	295.00	443 33	.....	66 67	510 00	383 67	115 10
Sawyer	"	2.43	1.29	58.43	264.71	354 36	6 93	.....	361 29	371 29	108 29
Upholsterer	"	0.78	0.33	57.22	289.00	499 72	.....	.....	499 72	378 22	212 75
Varnisher	"	2.50	2.00	59.50	262.50	315 00	4 50	100 00	419 50	455 50	130 14
Wood turner	"	3.08	2.23	57.77	275.77	365 83	7 69	.....	373 52	353 31	86 66
Gardener	"	4.11	2.89	60.11	271.33	379 89	17 11	47 22	444 22	396 11	77 50

TABLE No. XXVIII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and ages, over or under 16.	No. of dependents.		Time employed.		Yearly earnings.					Cost of living.		
		Total.	Under 16.	Hours per week.	Days in year.	Wages from occupation.	Extra.	Wife & minor children.	Total.		Total.		Per capita.
						$ c.	$ c.	$ c.	$ c.		$ c.		$ c.
Gas works employe	m.o.	1.64	1.18	76.64	306.36	482 27			482 27		417 00		158 17
Gilder	"	0.57	0.43	55.71	306.00	402 86			402 86		380 00		241 82
Glass factory employe:													
Blower	"	4.73	3.64	41.55	174.09	701 82			701 82		592 73		103 49
Gathering boy	"	1.67	1.00	38.00	175.00	350 00	33 33		383 33		350 00		131 25
Various	"	1.33	0.50	52.83	209.83	306 71	30 21	13 00	349 92		340 17		145 79
Harnessmaker	"	2.56	1.63	58.96	279.48	375 94	9 41	18 70	404 05		356 24		100 19
Hatter and furrier	"			56.50	220.50	298 42	23 45		321 87		288 09		288 09
" "	f.o.			51.20	231.00	167 00	22 00		189 00		162 80		162 80
Hotel employe (with board):													
Bell boy	m.u.			78.00	329.67	120 00			120 00		117 33		
Chambermaid	f.o.			69.00	365.00	102 25			102 25		93 00		
Clerk	m.o.	1.80	1.00	71.60	307.80	397 80	35 00	30 00	462 80		335 00		
Cook	f.o.	0.17	0.17	73.00	329.83	202 33			202 33		121 00		
Kitchen girl	"			78.00	365.00	110 50			110 50		97 50		
Laundress	"	1.25	1.00	52.50	281.00	151 25			151 25		121 50		
Porter	m.o.			76.00	312.33	242 67	24 33		267 00		190 33		
Steward	"	4.33	2.67	72.00	329.67	300 67	26 00	33 33	360 00		361 67		
Waiter	f.o.	0.25	0.25	70.50	364.25	104 70			104 70		87 75		
Various	m.o.	3.00	2.00	79.50	306.00	410 00	12 50		422 50		404 50		
Knife maker	"	3.00	2.00	57.00	265.00	423 63	7 50		431 13		454 00		113 50
Knitting mill operative	"	4.00	2.50	60.00	306.00	387 50	12 50	8 00	408 00		357 50		71 50
" "	f.o.			60.00	213.00	193 50			193 50		115 00		115 00
Laborer (general)	m.o.	2.79	1.81	55.32	224.94	295 64	16 19	22 72	334 55		331 30		87 34
Lamplighter	"	3.80	2.80	59.80	282.20	353 60	30 00		383 60		377 40		78 63
Lather	"	1.07	0.64	52.36	202.71	403 79	9.78		413 57		320 36		154 66
Lock factory employé	"	3.29	2.57	58.29	267.14	599 29			599 28		439 14		102 47
Lumber mill employé:													
Cutter	"	2.50	2.00	63.00	308.00	433 00			433 00		345 00		98 57
Edger	"	4.00	3.00	63.00	304.00	484 00			484 00		450 00		90 00
Filer	"	4.50	3.00	58.75	282.00	458 00		37 50	495 50		429 25		78 05
Measurer	"	3.00	2.00	60.00	308.00	546 00			546 00		425 00		106 25
Sawyer	"	3.29	2.29	56.29	262.57	421 71	6 43	5 00	433 14		379 14		88 47
Stamber	"	3.50	2.00	62.50	250.00	300 00	50 00	75 00	425 00		370 00		82 22
Various	"	2.80	1.60	61.20	237.00	286 00	20 00		306 00		296 00		77 89
Marble cutter	"	1.78	1.11	57.44	261.00	437 17	4 44		441 61		330 78		119 08
Mason (stone)	"	2.44	1.59	56.26	179.05	382 31	27 01	11 80	421 12		336 64		97 98
Miller	"	4.30	2.70	61.70	300.50	438 70	1 25		439 95		389 75		73 54
Milliner	f.o.	0.10		59.70	272.20	235 30	6 00		241 30		183 20		166 55
Millwright	m.o.	3.00	1.70	59.10	278.00	545 35		20 00	565 35		472 20		118 05
Miscellaneous	"	2.96	1.96	58.54	279.07	382 88	5 36	9 37	397 61		378 43		95 46
"	f.o.	1.20	0.40	48.00	262.00	196 00	5 00	30 00	231 00		185 80		84 45
"	m.u.			57.00	292.50	107 50			107 50		96 00		96 00
Newspaper employé:													
Pressman	m.o.	2.00	1.60	57.90	302.60	474 75	50 00		524 75		417 55		139 18
Printer	"	1.82	1.11	58.23	281.42	425 29	4 65	10 44	440 38		405 88		143 70
Reporter	"	0.80	0.40	58.00	305.00	546 40	36 00		582 40		482 00		267 78
Various	"			55.00	301.67	449 00			449 00		383 67		383 67
Organ factory employé:													
Action Maker	"	1.80	1.20	59.20	296.20	461 80	10 00		471 80		363 20		129 71
Case maker	"	2.57	1.86	59.00	281.43	455 00	11 86		466 86		390 86		109 44
Finisher	"	2.00	1.50	59.00	297.50	346 25			346 25		315 00		105 00
Trimmer	"	3.33	2.00	60.00	290.00	470 50			470 50		416 67		96 15
Tuner	"	2.00	1.00	48.00	293.33	700 00			700 00		540 33		180 11
Upholsterer	"	4.00	1.50	56.50	265.00	347 50	3 00		350 50		313 00		62 60
Various	"	2.67	2.00	59.44	295.44	446 59	2 89		449 48		370 06		100 92
Packer	"	1.20	0.60	60.00	307.80	379 80	17 00		396 80		329 80		149 91
Painter	"	2.11	1.21	57.54	245.29	376 70	2 64	7 14	386 48		362 11		116 54
Paper box and bag maker	f.o.			56.40	260.70	213 60			213 60		216 75		216 75
Paper mill employé	m.o.	2.33	1.33	68.00	311.33	504 53			504 53		537 33		161 20
Photographer	"			52.00	302.00	358 00	26 67		384 67		248 67		248 67
Plasterer	"	3.00	2.29	53.79	219.14	454 21	6 79		461 00		411 41		102 85
Plumber	"	2.60	2.00	57.20	256.40	541 49	6 30	0 60	548 39		418 55		116 26

TABLE No. XXVIII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and age; over or under 16.	No. of dependents.		Time employed.		Yearly earnings.				Cost of living.	
		Total.	Under 16.	Hours per week.	Days in year.	Wages from occupation.	Extra.	Wife and minor children.	Total.	Total.	Per capita.
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Porter and messenger	m.o.	3.25	2.50	60.00	300.00	411 00	8 00		419 00	481 00	113 18
Pump maker	"	4.33	3.00	55.83	286.67	381 47	.....	50 00	431 47	394 00	73 88
Quarryman	"	2.00	1.00	55.00	212.50	326 22	.....	3 00	329 22	320 52	106 84
Railway employé (road):	"										
Brakesman		2.38	1.62	63.08	298.62	486 43	7.38	.....	493 81	426 56	126 03
Checker	"	2.00	0.50	66.00	278.50	378 00	.....	.....	378 00	344 00	114 67
Cleaner or wiper	"	2.83	2.17	67.33	351.17	408 58	.....	41 67	450 25	374 17	97 61
Conductor	"	4.25	3.25	67.25	277.00	544 00	3 75	.....	547 75	476 50	90 76
Engineer	"	4.63	3.63	62.44	308.38	908 50	.....	1.25	909 75	517 63	92 02
Examiner or tapper	"	5.80	4.00	60.00	312.20	395 80	25 60	30 00	451 40	420 60	61 85
Fireman	"	2.70	2.00	64.60	308.90	570 70	.....	.....	570 70	376 60	101 78
Porter	"	1.50	1.00	60.00	314.50	368 00	.....	.....	368 00	280 00	112 00
Switchman	"	2.00	1.50	63.00	321.50	397 50	.....	.....	397 50	378 50	126 17
Yardman	"	2.50	1.50	63.50	319.00	448 63	.....	.....	448 63	384 00	109 71
Various	"	2.63	1.88	62.88	304.13	368 88	3 69	0 62	373 19	329 50	90 90
Railway employé (shop):											
Blacksmith	"	5.00	3.20	57.80	299.70	502 60	.....	2.40	505 00	460 20	76 70
" helper	"	2.14	1.57	56.57	293.86	329 71	11 43	14 86	356 00	348 71	110 95
Boilermaker	"	2.80	1.80	59.40	279.40	430 40	.....	.....	430.40	382 60	100 68
Car builder	"	4.29	2.71	54.79	281.43	434 65	13 64	25 43	473 72	443 13	83 84
Car repairer	"	3.50	2.00	60.00	313.00	450 00	.....	37 50	487 50	369 50	82 11
Fitter	"	3.00	1.50	54.75	280 50	443 98	.....	.....	443 98	429 75	107 44
Machinist	"	2.33	0.83	59.58	314.25	509 83	4 17	.....	514 00	423 83	127 15
Moulder	"	3.25	2.25	58.25	273.00	458 71	.....	.....	458 71	407 00	95 76
Painter	"	2.86	1.57	53.64	284.07	386 25	10 36	1 78	398 39	378 53	98 14
Pattern maker	"	3.33	2.00	57.67	294.67	513 00	.....	.....	513 00	418 33	96 54
Tinsmith	"	2.10	1.20	53.70	280.00	412 07	7 70	.....	419 77	352 94	113 84
Woodworker	"	4.85	3.15	53.92	272.92	397 20	.....	12 00	409 20	406 85	69 59
Various	"	3.39	1.78	53.78	276.09	307 30	18 61	35 74	361 65	339 52	77 32
Rattan worker	f.o.	.....	.....	59.00	308.33	165 83	.....	.....	165 83	164 83	164 83
Rope maker	m.o.	5.00	3.50	48.00	312.00	312 00	.....	.....	312 00	312 00	52 00
Safe maker	"	3.50	2.50	59.00	298.00	479 40	.....	.....	479 40	441 00	98 00
Sailor	"	1.69	0.94	85.88	203.06	338 44	7 81	15 63	361 88	320 13	119 12
Salesman	"	1.31	0.79	61.06	305.85	418 98	0 81	1 92	421 71	338 13	146 53
Saleswoman	f.o.	.....	.....	60.00	312.67	225 33	.....	.....	225 33	225 33	225 33
Sash, door and blind maker	m.o.	3.48	2.45	59.55	294.97	447 21	4 69	.....	451 90	373 55	83 33
Screw factory employé	"	1.86	1.14	60.00	231.86	254 01	4 28	21 43	279 72	306 98	107 44
" "	f.o.	.....	.....	60.00	263.50	170 25	.....	.....	170 25	168 50	168 50
Sewing machine factory employé:											
Cabinet maker	m.o.	3.50	1.75	53.00	288.75	408 13	6 25	.....	414 38	427 00	94 89
Machinist	"	3.00	2.50	56.00	273.50	388 58	.....	.....	388 58	337 50	84 38
Woodworker	"	4.40	2.20	55.20	288.00	401 50	.....	.....	401 50	464 00	85 93
Various	"	1.50	1.00	54.50	255.00	276 25	.....	.....	276 25	270 50	108 20
Ship carpenter	"	3.17	1.67	42.67	189.67	283 51	.....	64 17	347 68	425 33	102 08
Shipper	"	3.75	2.50	58.25	303.50	471 75	42 25	3 00	517 00	412 25	86 79
Shirt maker	f.o.	0.33	0.33	65.00	299.33	356 67	.....	.....	356 67	246 67	185 00
Shoemaker	m.o.	4.63	2.98	58.28	282.59	382 09	26 73	35 00	443 82	408 08	72 48
Silverplater	"	2.33	2.00	59.67	275.67	590 00	.....	.....	590 00	475 00	142 50
Spring grinder and fitter	"	2.83	1.67	56.00	261.50	449 33	8 33	.....	457 66	378 50	98 74
Stove foundry employé:											
Blacksmith, helper	"	3.00	2.50	60.00	312.00	337 75	.....	.....	337 75	306 50	76 63
Machinist	"	5.00	3.60	60.20	301.60	460 28	12.80	.....	473 08	401 00	66 83
Melter	"	5.50	3.50	62.50	312.00	347 50	.....	.....	347 50	363 00	55 85
Moulder	"	2.67	1.33	59.00	229.17	489 60	6 50	.....	496 10	468 43	127 75
Mounter	"	4.17	2.50	59.00	281.33	471 13	.....	.....	471 13	425 50	82 35
Pattern maker	"	3.00	1.75	58.50	304.00	446 25	3.75	.....	450 00	372 25	93 06
Plater	"	4.25	2.75	60.75	284.00	426 75	15 00	39 50	481 25	374 75	71 38
Polisher	"	3.50	2.50	60.00	240.00	365 00	.....	.....	365 00	365 00	81 11
Various	"	5.00	3.83	58.50	305.00	385 33	.....	.....	385 33	419 17	69 86
Tailor shop employé:											
Cutter	"	2.00	1.25	55.50	305.76	682 50	28.75	.....	711 25	474 75	158 25
Tailor	"	2.46	1.49	57.60	275.29	419 60	10.37	0 77	430 74	358 67	102 30
Tailoress	f.o.	0.16	0.02	55.68	251.75	186 59	2.09	1 40	190 08	164 63	142 18

TABLE No. XXVIII.—LABOR AND WAGES—*Continued.*

Occupation or Sub-Occupation.	Sex and age, over or under 16.	No. of dependents. Total.	No. of dependents. Under 16.	Time employed. Hours per week.	Time employed. Days in year.	Yearly earnings. Wages from occupation.	Yearly earnings. Extra.	Yearly earnings. Wife and minor children.	Yearly earnings. Total.	Cost of living. Total.	Cost of living. Per capita.
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
annery employé:											
Beam hand	m.o.	2.33	1.33	57.67	286.00	385 17	.....	.....	385 17	386 67	116 00
Currier	"	3.36	2.18	59.18	288.73	425 43	.....	.....	425 43	391 86	89 80
Tanner	"	3.28	1.72	59.00	295.50	400 09	0 55	16 67	417 31	357 79	83 64
Teamster	"	2.74	1.86	62.95	300.47	390 07	4 43	0 86	395 36	352 16	94 13
Telegraph operator	"	0.67	0.33	66.00	325.33	536 67	.....	.....	536 67	366 67	220 00
Telephone operator	f.o.	....	....	54.00	313.00	208 00	.....	.....	208 00	195 00	195 00
Tinsmith	m.o.	2.06	1.24	58.27	296.58	451 58	10 51	.....	462 09	399 11	130 40
Tool maker	"	3.86	2.14	56.86	251.86	406 71	.....	47 00	453 71	454 71	93 62
Traveller	"	1.20	0.40	60.00	313.00	960 00	.....	.....	960 00	685 00	311 36
Trunkmaker	"	3.50	3.00	54.00	284.00	415 00	95 00	.....	510 00	440 50	97 89
Wagon maker	"	2.00	0.75	60.00	262.50	395 25	12 50	62 50	470 25	485 00	161 67
Watchmaker and jeweller	"	1.11	0.53	54.00	294.79	443 65	.....	1 31	444 96	384 05	182 43
Watchman and caretaker	"	3.30	1.90	70.70	347.70	321 70	10 00	37 00	368 70	334 60	77 81
Wheel maker	"	5.00	3.00	60.00	271.50	440 45	30 00	42 50	512 95	504 50	84 08
Wire worker	"	....	....	58.33	261.33	329 55	.....	.....	329 55	257 67	257 67
Woollen mill employé:											
Assorter	"	4.33	3.00	60.00	293.33	518 33	.....	10 00	528 33	474 00	88 88
Carder	"	2.00	1.00	60.00	298.00	491 00	.....	.....	491 00	315 00	105 00
Darner	f.o.	....	....	60.00	285.00	220 00	.....	.....	220 00	157 00	157 00
Dresser	m.o.	....	....	60.00	300.50	192 00	.....	.....	192 00	185 00	185 00
Dyer	"	3.40	2.00	60.00	288.20	396 00	.....	12 00	408 00	398 20	90 50
Dyer helper	"	3.80	2.40	60.00	256.00	256 00	2 00	45 60	303 60	273 00	56 88
Finisher	"	2.00	1.14	60.00	288.71	432 14	.....	10 00	442 14	370 71	123 57
Fuller	"	2.00	1.25	60.00	285.25	324 00	.....	.....	324 00	297 50	99 17
Loom fixer	"	0.75	0.25	60.00	286.50	445 00	.....	.....	445 50	290 25	165 86
Machinist	"	2.50	1.50	60.00	300.00	600 00	.....	.....	600 00	452 00	129 14
Mule spinner	"	1.67	1.33	60.00	285.33	270 33	.....	.....	270 33	241 33	90 50
Picker tender	"	2.00	1.00	60.00	237.00	163 33	.....	33 33	196 66	251 67	83 89
Scourer	"	5.00	4.00	60.00	303.50	303 50	15 00	112 50	431 00	455 88	75 98
Spinner	"	3.40	2.00	60.00	272.00	427 00	20 00	15 00	462 00	408 00	92 73
"	f.o.	....	....	60.00	255.00	148 50	.....	.....	148 50	148 50	148 50
Spooler	"	....	....	60.00	280.33	135 00	.....	.....	135 00	128 33	128 33
"	f.u.	....	....	60.00	282.00	130 67	.....	.....	130 67	129 67	129 67
Twister	f.o.	....	....	60.00	273.33	138 33	.....	.....	138 33	132 67	132 67
Warper	"	....	....	60.00	291.00	211 33	.....	.....	211 33	190 00	190 00
"	m.o.	3.50	2.00	60.00	302.50	554 00	.....	.....	554 00	402 50	89 44
Weaver	"	3.00	2.00	60.00	290.00	547 50	.....	.....	547 50	439 50	109 88
"	f.o.	....	....	60.00	274.00	188 54	.....	.....	188 54	188 79	188 79
Various	"	0.17	....	61.67	284.17	159 50	12 00	....	171 50	129 67	111 43
"	m.o.	1.30	1.00	59.80	277.60	366 00	.....	.....	366 00	312 10	135 70
"	f.u.	....	....	60.00	288.00	111 50	.....	.....	111 50	110 00	110 00
Wringer maker	m.o.	1.00	0.50	54.25	261.00	477 10	.....	.....	477 10	261 00	130 50
Averages for all occupations	"	2 57	1.64	58.21	270.18	403 38	8 22	10 13	421 73	370 97	103 85
	f.o.	0.11	0.04	57.15	272.19	190 32	3 55	1 31	195 18	163 90	147 38
	m.u.	....	....	57.90	267.29	119 52	0 72	.....	120 24	117 95	117 95
	f.u.	....	....	59.56	285.00	131 25	.....	.....	131 25	130 69	130 69
Averages for all classes	1886	.....	2.33	1.48	58.13	270.41	381 83	7 72	9 26	398 81	350 36	105 14
	1885	.....	2.15	1.38	58.85	271.28	372 98	6 72	9 15	388 85	332 50	105 40
	1884	.....	2.18	....	59 10	265.17	372 29	4 33	6 69	383 31	334 47	105 27

Note.—In this table the number of dependents is the average for the total number of workpeople in the various occupations, and the worker himself is not included. In the cost of living per capita worker and dependents are included.

PART IV.

SCHOOLS, POPULATION, TRADE, ETC.

MISCELLANEOUS STATISTICS.

This part of the report is mainly intended to exhibit the growth and progress of the province as shown by the statistics of schools, population, commerce, local government, etc. Much care as well as labor has been bestowed on the several tables, and although the results are not altogether satisfactory with respect to one or two subjects, it may be said that no effort has been spared to procure correct data or to eliminate obvious errors. The greatest difficulty has been experienced in tabulating the returns of local assessment and taxation, and the correspondence arising out of doubtful or improbable statements would make a good sized volume. The ancient schedule that has done duty for a generation in procuring municipal statistics is in part to blame for the unsatisfactory character of the returns, and the intelligent assessor also in part. Had the duty of filling up the financial items of the schedule fallen upon the municipal treasurer, it is possible that fewer mistakes might have been made in the entries; but when that duty fell to the lot of the clerk, and when in addition to making a new analysis of accounts he had to delve into the mysteries of schedule headings the exact meaning of which no man now living appears to know, it is not a wonder that in regard to a number of items the returns were altogether untrustworthy and could not be used. Under the provisions of the Municipal Act as now amended better results may with confidence be looked for. Yet in one important particular it seems probable that grave errors will continue to mar the value of the returns. The additions of the assessor are sometimes, if not oftentimes, fearfully and wonderfully made, and the Act does not provide for their revision. Statistics of the assessment roll, which ought to be very useful and valuable, are in many cases very misleading in consequence; and although the existence of an error is readily discovered by comparing the returns for successive years, there is no way of procuring a correction except by favor of the township clerk. The statistics of Trade and of Loan Companies have been prepared from Government reports.

Schools.—Tables I and II present statistics relating to the schools of Ontario for the forty-four years 1842-85. In the latter year there was, according to the returns, a total population of 583,137 between 5 and 21 years of age, of whom 486,708 or 83 per cent. were entered on the school rolls as being in attendance. The records for all previous years give population for the ages of 5 to 16 years, while the number enrolled embraces pupils of all ages; consequently it is not possible in this particular to compare the statistics of 1885 with those of any former year. Of the 486,708 enrolled in this year, 444,868 or 91 per cent. belong to public schools, 27,590 or 6 per cent. to separate schools, and 14,250 or 3 per cent. to high schools. In 1875 the number enrolled was 482,583, of whom 451,568 or 93½ per cent. belonged to public schools, 22,673 or 4¾ per cent. to separate schools, and 8,342 or 1¾ per cent. to high schools. In 1875 the average attendance at all the schools was 203,073, or 42 per cent. of the number enrolled, and in 1885 it was 234,114 or 48 per cent. of the enrolled. This shows a marked improvement during the decade, and yet the average attendance is not quite equivalent to attendance for half

the number of teaching days in the year by all pupils. The number of schools of all classes increased in the decade from 4,951 to 5,502 or 11 per cent., the increase of public schools being 499, and of separate schools 53, and a decrease of one in the number of high schools. The average salary of high school teachers rose in the decade from $730 to $806, of public school teachers from $296 to $329, and of separate school teachers from $207 to $222. During the thirty years 1855-85 the number of schools of all classes increased from 3,390 to 5,502, the number of teachers from 3,660 to 7,583, the salaries of teachers from $726,363 to $2,621,128, and the total expenditure for school purposes from $953,412 to $3,742,462. The number of enrolled pupils increased during the same period from 231,590 to 486,708. In the public schools the number of male exceeded the number of female teachers down to 1871, and from 1872 to 1881 the number of each sex stood nearly equal. Beginning with 1882, however, the disproportion has widened steadily and rapidly, until in 1885 females were 61 per cent. and males only 39 per cent. of the whole. In the separate schools they have advanced in a still more rapid ratio, and now comprise 78 per cent. of the whole.

Area and Population.—Table III presents the population of the province by county, township, village, town and city municipalities for the ten years 1877-86, as taken by the municipal assessors, and also the assessed area for each municipality in 1886. In respect both of area and population, the county of Grey takes the first place, having an area, exclusive of towns and villages, of 1,063,271 acres, and a rural population of 56,018. Simcoe with an area of 951,568 acres is second in size, but Middlesex takes second rank in population, having a total of 52,471. Out of the forty-five counties and districts into which the province is divided, no less than seventeen show a slight falling off in the rural population of 1886 as compared with that of 1877. The decreases occur mainly in the older counties along the shores of lakes Erie and Ontario, and in the figures of rural population chiefly. Whenever towns or villages come within the bounds of counties with a decreasing rural population the increase in these generally suffices to offset the falling away in the county: but in the counties of Norfolk, Haldimand, Huron, Perth, Durham, Northumberland and Prince Edward the total population was less in 1886 than in 1877.

In table IV is given by counties and groups the assessed area for 1886, the total population for each of the last ten years, and the population in 1886 per square mile of assessed area, classified as rural and urban, of which the following is a summary by groups of counties:

Year.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. L. and Ottawa.	East Midland.	Northern districts.	The Province.		
									Rural.	Urban.	Total.
1877.....	195,069	165,421	118,344	315,404	394,697	311,321	107,967	12,120	1,108,671	511,672	1,620,343
1878.....	199,754	167,609	121,749	317,767	400,535	315,558	108,753	14,310	1,117,580	528,455	1,646,035
1879.....	205,444	168,894	124,300	324,066	404,117	319,289	111,230	16,227	1,128,889	544,678	1,673,567
1880.....	206,976	168,541	125,023	329,505	405,968	317,196	112,359	18,315	1,131,288	552,595	1,683,883
1881.....	207,843	169,537	125,122	329,619	410,706	319,501	112,157	19,013	1,134,192	559,306	1,693,498
1882	206,656	167,254	125,423	327,514	414,841	319,841	112,114	21,723	1,120,574	574,792	1,695,366
1883.....	206,823	166,258	126,809	328,289	419,406	326,591	112,449	23,716	1,115,841	594,500	1,710,341
1884.....	210,636	168,805	130.312	330,738	432,455	336,273	114,016	30,809	1,117,866	636,178	1,754,044
1885. ...	213,552	170,501	133,230	333,519	441,795	343,745	117,195	31,573	1,126,594	658,516	1,785,110
1886.....	215,499	173,285	134,730	339,032	454,195	351,397	118,170	32,718	1,144,520	674,506	1,819,026
Per sq. m. in 1886.											
Rural...	40.8	34.6	33.2	40.8	44.6	30.1	19.5	14.8	.....	.....	33.7
Urban ..	1,706	1,212	883	1,741	2,950	1,713	2,156	744	.....	.....	1,852
Total..	58.2	48.2	42.3	65.7	93.7	43.0	29.0	20.2	.....	.....	52.9

In this table the cities are included in the respective counties within which they are situated, and a comparison of the totals at the foot of the table will show how much more rapidly the population has grown in the cities, towns and villages than in the townships. During the ten years the township population increased from 1,108,671 to 1,144,520, being for the ten years a fraction over three per cent. In the same period the city, town and village population grew from 511,672 to 674,506, an increase of nearly 32 per cent. St. Thomas with an increase in population of 5,954, as appears from table v, shows the largest percentage of gain of any of the cities, amounting to seven per cent. per annum. Toronto comes next in point of percentage, but with of course the largest numerical increase of any city in the province. During the ten years its population has increased by 46,815, a gain of 6½ per cent. per annum.

The number of township municipalities in the province increased in the ten years period by 27, and the number of urban municipalities 32.

Public Lands and Timber Limits.—The extent of public lands sold in Ontario from the beginning of Confederation to the close of last year, together with the area of timber limits held under license each year, is shown in table VII. The sales of Crown lands during the twenty years have reached an aggregate of 1,200,339 acres, of Clergy lands 162,624 acres, of Common School lands 44,637 acres, and of Grammar School lands 61,659 acres, making in all 1,469,259 acres, or an average of 73,463 acres for each year. These sales realized the sum of $1,822,301, or an average of $1.24 per acre. The area of timber limits held under license in the first year of Confederation was 6,155 square miles, which in the following year was extended to 11,584 square miles. Since that year the area has fluctuated somewhat, rising to 16,259 square miles in 1874, falling to 15,612 square miles in 1881, and rising again to 18,486 square miles in 1886—the greatest extent to which timber limits have yet obtained.

Local Assessment and Taxation.—The revenue required for municipal and school purposes in the province is raised chiefly by a rate imposed on the assessed value of real and personal property in the municipalities. Other sources are license fees, Government grants and the income from investments, but these constitute only a small portion of the whole. Table VIII of this part of the report shows the amount which property contributes for schools and the conduct of municipal affairs. It represents the extent to which the people sustain local government by direct taxation, under the administration of representative bodies chosen by the people themselves,—for a yearly term in the case of municipal councils, and for a three years' term in the case of school boards, one-third of the members of a board going out each year. The table gives the assessment and taxation of rural and urban municipalities by counties for the five years 1881-5, compiled from returns made to the Government by county clerks. The rural municipalities include all the townships, and the urban all the incorporated towns and villages in each county municipality, irrespective in the case of the latter of whether they are united or separated from the county for municipal purposes; the cities are given separately.

The number of ratepayers in rural municipalities increased during the four years 1881-5 by 10,936, or 3¾ per cent.; in urban municipalities by 24,404, or 15½ per cent.; and in the province by 35,340, or nearly 8 per cent. The number of acres of assessed land increased in the same period by 472,555 in townships and by 15,191 in towns, being an increase of 2½ per cent. in the four years. The increase of assessed value of real property in townships in the four years was $32,720,350, or 8½ per cent; while in villages, towns and cities the increase was $30,954,093, or 18½ per cent. For the whole province the increased valuation of real property in rural and urban municipalities was $63,674,443, or 13½ per cent. In the same period the valuation of personal property and taxable income in rural municipalities increased by $3,722,838, or 15⅝ per cent.; in urban municipalities it increased by $6,737,455, or 25½ per cent.; and in all municipalities it increased by

$10,460,293, or nearly 21 per cent. In 1881 the total assessed valuation of real and personal property in rural and urban municipalities was $602,601,240, of which 91⅔ per cent. was real property and 8⅓ per cent. personal; in 1885 the total valuation was $676,735,976, of which 91 per cent. was real property and 9 per cent. personal; and the increase of valuation in the four years was $74,134,636, or 12⅓ per cent. The amount of taxes imposed for municipal purposes increased in townships by $215,189 from 1881 to 1885, or 10¼ per cent., and in villages, towns and cities by $585,983, or 23 per cent. For all municipalities of the province the amount of taxes imposed rose from $4,647,338 in 1881 to $5,448,510 in 1885, including the rates for local, urban and county municipalities, being an increase in the four years of 17½ per cent. The amount of school taxes imposed in the same period increased by $129,289, or 8 per cent., in townships; by $227,261, or 24⅓ per cent., in cities, towns and villages; by $356,550, or 14 per cent., in all the municipalities. The total taxation for municipal and school purposes rose in the townships from $3,694,095 in 1881 to $4,038,573 in 1885, an increase of 9⅓ per cent.; in villages, towns and cities it rose from $3,481,553 to $4,294,797, an increase of 23⅓ per cent.; and in all rural and urban municipalities it rose from $7,175,648 to $8,333,370, an increase of 16 per cent. The rate of taxation for municipal and school purposes per head of population, reckoned on the basis of assessors' enumeration, increased in townships from $3.28 in 1881 to $3.60 in 1885; in cities, towns and villages it increased from $6.22 to $6.58; and in all municipalities it increased from $4.26 to $4.70 per head. The average rate on the dollar of assessed valuation was uniformly 9.1 mills in townships throughout the period, and in villages, towns and cities it rose from 17.9 in 1881 to 18.5 in 1885—the average rate for all municipalities rising from 11.9 to 12.3 mills on the dollar. In 1881 the taxes imposed for school purposes were 43 per cent. of the whole in townships, 26¾ per cent. in cities, towns and villages, and 35¼ per cent. for all the rural and urban municipalities; in 1881 they were 42¾ per cent. in townships, 27 per cent. in cities, towns and villages, and 34⅔ per cent. in all the municipalities. In most of the western counties the taxes for municipal purposes largely exceed the taxes for school purposes, but in eastern counties the ratios are much nearer an equality. This is more noticeable in the case of rural municipalities, where in some counties the school tax exceeds the municipal tax. In the united counties of Northumberland and Durham, for instance, the school taxes in townships exceeded the municipal taxes by $7,374 in 1885; in Leeds and Grenville their excess in the same year was $3,789; in Stormont, Dundas and Glengarry the excess was $9,457; in Prescott and Russell it was $5,273; in Carleton, $4,506; in Renfrew, $7,001; and in Lanark, $9,589.

Table IX presents a summary of assessment and taxation statistics for all the municipalities of the province for the thirteen years 1873-85, giving for each year the number of ratepayers, area of land assessed, assessed value of real and personal property, taxes imposed for municipal and school purposes, and rate of taxation for both purposes. But although the statistics are for thirteen years, they cover for comparative purposes only twelve years. If, to show the rate of growth and expansion of the province as indicated by those figures, we divide the time covered by the table into two equal periods, 1873-79 and 1879-85, some interesting comparisons may be made. In the first six years the the number of ratepayers in rural municipalities increased by 40,364, or 16¼ per cent.; in urban municipalities by 38,597, or 34½ per cent.; and in the whole province by 78,961, or 22 per cent. In the second six years the number of ratepayers in rural municipalities increased by 13,360, or 4⅔ per cent.; in urban municipalities by 31,529, or 21 per cent., and in the province by 44,889, or 10 per cent. In the twelve years the increase was 123,850, or 34⅕ per cent. Taking next the area of assessed land, it will be seen that in rural municipalities the increase in the first six years was 1,001,233 acres, or 5 per cent.; and in the second six years 622,978 acres, or 3 per cent; in urban municipalities the increase in the first period was 36,637 acres, or 22 per cent.; and in the second period 21,470 acres, or 10½ per cent; while for the twelve years the increase in all municipalities was 1,682,318 acres, or 8½ per cent.* A comparison of assessed values of real and

* This does not embrace the area of occupied lands in unorganized townships, to which reference is made on page 4, nor occupied lands in townships of the Northern districts which are not connected with counties for municipal purposes.

personal property in the two periods would be unfair and misleading without reference to the adoption of a policy by municipal bodies in 1875 for giving effect to a provision of the Assessment Act which required that "real and personal property shall be estimated at their actual cash value, as they would be appraised in payment of a just debt from a solvent debtor." Although an old provision of the statute, this was never fairly acted upon until 1875, when real property was put up $113,300,000 and personal property $6,200,000 above the assessment of the previous year, which in the following year was further increased in the aggregate by $47,000,000. The increase in the valuation of real property in rural municipalities in the twelve years was $221,128,183, of which $178,530,432 belongs to the first period of six years and $42,597,751 to the second; the valuation of personal property in these municipalities increased $6,602,926, the portion of the first six years being $2,852,518 and of the second $3,750,408. The increase in urban municipalities was $56,310,229 in real property and a decrease of $5,050,602 in personal property in the first period, and in the second an increase of $35,830,058 in real and of $8,808,966 in personal property. The increased valuation of real property in all the municipalities of the province, rural and urban, in the twelve years was $313,268,470, and that of personal property in the same period $10,361,290,—the total valuation of real and personal property having been raised from $353,106,216 in 1873 to $676,735,976 in 1885, an increase of $323,629,760 or nearly 92 per cent. The amount of taxes imposed for municipal and school purposes in townships, cities, towns and villages was $5,605,779 in 1873, $7,157,366 in 1879 and $8,333,370 in 1885, being an increase of $1,551,587 or 27⅔ per cent. in the first six years and $1,176,004 or 16½ per cent. in the second. In rural municipalities the rate of increase in the first period was 9¼ per cent. and in the second 8⅔ per cent., while in urban municipalities the rate of increase was 56 per cent. in the first and 25 per cent. in the second period. In 1873, 61⅔ per cent. of the taxes imposed on all municipalities was required for municipal and 38⅓ per cent. for school purposes; in 1879, 65½ per cent. for municipal and 34½ for school purposes; and in 1885, 65⅓ per cent. for municipal and 34⅔ for school purposes. The rate of taxation for all purposes increased in townships from $3.25 per head of population (assessors' census) in 1873 to $3.31 in 1879 and to $3.60 in 1885; and in cities, towns and villages it increased from $5.42 per head in 1873 to $6.32 in 1879 and to $6.58 in 1885. The rate on the dollar of assessed value fell in townships from 15.7 mills in 1873 to 9.4 mills in 1879, largely as a consequence of the increased valuation, and to 9.1 mills in 1885. In the cities, towns and villages, however, notwithstanding the increased valuation of property, the rate was 16.1 mills in 1873, 18.3 mills in 1879 and 18.5 mills in 1885.

Table x gives by counties the average assessed value of real property per acre in the township municipalities of the province for each of the thirteen years 1873-85. It will be observed that in a few counties, such as Essex, Lambton and Grey, the plan of high valuation was not adopted until 1882 and 1883, but generally it was adopted in 1875 and 1876. In 1873, the average over the province was $10.02 per acre; in 1879 it was $18.23, and in 1885 it was $19.71 per acre. Compared with the valuation placed by farmers on their lands, in filling up their June schedules for the Bureau, there can be no doubt that these figures are much below the actual value of land in the rural districts.

Table xi shows the amounts received by county municipalities from the Ontario Government in the five years 1881-5, for school purposes and for the administration of justice, which otherwise would have to be provided out of local sources. In the first of these years the total amount so received by the municipalities was $447,744, and in the last it was $487,590, an increase in four years of $39,846.

It was intended to present a full statement of receipts and expenditure for municipal government in the province, but the returns under many heads were found to be so incomplete and so inaccurate that the task had to be abandoned. The ancient schedule seems to have been worse than a Chinese puzzle to the great majority of municipal clerks.

EXPORTS OF THE DOMINION.—Reference has already been made (pp. 165-6) to our trade with other countries in grain and breadstuffs, showing for principal articles the volume of imports and exports, of exports not the produce of Canada, our net surplus or deficit of products as shown by the trade tables and the value of total exports. The figures of this trade are given in detail in table XII for the ten years ending June 30, 1886. Table XIII gives the quantities and values of all exports the growth, produce or manufacture of the Dominion for the eight fiscal years 1879-86, together with the average price of a unit of each article computed from the declared values. The exports of produce of the mine for 1886 show a slight advance over those of the previous year, the increase being principally in gold-bearing quartz. The exports of forest products also show a small advance. Agricultural exports have increased more than any other class in the year, being upwards of three millions of dollars over those of the preceding year. It will be observed, however, that the value of exports of this class of produce for 1886 is only a little more than the average for the nineteen years since Confederation. Under the head of manufactures the most rapid development has taken place in the trade in musical instruments, the exports of which have increased from $24,175 in 1879 to $162,754 in 1886. But in several important industries the exports of manufactures have decreased, the aggregate of 1886 being $2,324,064 less than that of 1876, and $365,908 less than the annual average since 1867.

The following table exhibits a summary of exports the produce of the Dominion for each fiscal year since Confederation, giving values only for each class of produce, with the totals of all classes and the yearly average of values for the whole period :

Year.	Produce of the Mine.	Produce of the Fisheries.	Produce of the Forest.	Animals and their Produce.	Agricultural Products.	Manufactures.	Miscellaneous Articles.	Totals.
	$	$	$	$	$	$	$	$
1868.....	1,276,129	3,357,510	18,742,625	6,893,167	12,871,055	2,100,411	302,280	45,543,177
1869.....	1,941,485	3,242,710	20,423,882	8,769,407	12,182,702	2,412,559	350,559	49,323,304
1870.....	2,192,541	3,608,549	21,533,300	12,138,161	13,676,619	2,560,370	371,652	56,081,192
1871.....	2,841,124	3,994,275	23,063,148	12,582,925	9,853,146	2,428,875	387,554	55,151,047
1872.....	3,389,984	4,348,508	24,245,500	12,416,613	13,378,562	2,708,203	513,066	61,000,436
1873.....	5,853,860	4,779,277	29,298,917	14,243,017	14,995,340	3,609,903	465,292	73,245,606
1874.....	3,760,835	5,292,368	27,237,779	14,679,169	19,590,142	2,946,655	419,800	73,926,748
1875.....	3,643,398	5,380,527	25,070,410	12,700,507	17,258,358	3,028,512	409,181	67,490,893
1876.....	3,731,827	5,500,989	20,333,230	13,614,569	21,139,665	5,148,201	393,368	69,861,849
1877.....	3,644,040	5,874,360	23,010,249	14,220,617	14,689,376	4,105,422	320,816	65,864,880
1878.....	2,816,347	6,853,975	19,511,575	14,019,857	18,008,754	4,127,755	401,871	65,740,134
1879.....	3,082,900	6,928,871	13,261,459	14,100,604	19,628,464	2,700,281	386,999	60,089,578
1880.....	2,877,351	6,579,656	16,854,507	17,607,577	22,294,328	3,242,617	640,155	70,096,191
1881.....	2,767,829	6,867,715	24,960,012	21,360,219	21,269,527	3,075,095	622,182	80,922,579
1882.....	3,013,573	7,682,079	23,991,055	20,518,662	31,035,712	3,329,598	535,935	90,106,614
1883.....	2,970,886	8,809,118	25,370,726	20,284,343	22,818,519	3,503,220	528,895	84,285,707
1884.....	3,247,092	8,591,654	25,811,157	22,946,108	12,397,843	3,577,535	560,690	77,132,079
1885.....	3,639,537	7,960,001	20,989,708	25,337,104	14,518,293	3,181,501	557,374	76,183,518
1886.....	3,951,147	6,843,388	21,034,611	22,065,433	17,652,779	2,824,137	604,011	74,975,506
Yearly average.	3,191,678	5,920,817	22,354,940	15,815,687	17,329,431	3,190,045	461,667	68,264,265

The value of exports for 1886 is considerably less than for any previous year since 1880, and fifteen millions of dollars less than in 1882, since which year it has steadily

declined. The forest has supplied a little more than one-third in value of all exports from Canada since Confederation; next come agricultural products (grain, breadstuffs, etc.) representing rather more than one-fourth of the export trade, and animals and their produce next, the three classes combining to form more than five-sixths of the total exports. The average exports under the head of manufactures proper represent less than one-twentieth of the whole, of mines about the same, and of fisheries about one-twelfth. The total agricultural products, including grain, breadstuffs, animals, etc., make up one-half of the whole.

Trade with the United States.—Table XIII gives the exports of Canada to all countries. Table XIV has been prepared with the object of showing the nature and extent of our trade with the United States, giving as it does the exports of goods the produce of Canada to the United States and of goods the produce of the United States to Canada for the fiscal years 1885 and 1886. This classification is only made in the exporting country; our tables of imports from the United States give the total quantities of merchandise without regard to the place of production, while our tables of exports classify it under the heads of domestic and foreign produce, and United States trade tables are prepared in the same way. A summary of the trade between the two countries in domestic products is given by values in the following table:

Classes of Products.	Canada's exports to United States.		United States' exports to Canada.	
	1885.	1886.	1885.	1886.
	$	$	$	$
The Mine	2,898,518	3,115,696	4,482,635	3,948,524
The Fisheries	3,560,731	2,587,548	244,935	222,824
The Forest	9,355,736	8,545,406	1,561,280	1,241,418
Animals and their produce	6,789,562	6,742,789	8,515,679	7,343,106
Agricultural products	8,395,370	8,756,667	11,699,822	10,591,520
Manufactures	1,133,497	1,203,835	7,556,029	7,238,660
Miscellaneous	485,179	551,351	51,874	58,233
Totals	32,618,593	31,503,292	34,112,254	30,644,285

The interchange of commodities, as appears by this table, maintains a tolerably even balance, with the advantage for the two years slightly in favor of the United States. The chief Canadian exports consist of products of the forest and farm and of animals and their produce, while those of the United States consist of animals and their produce, agricultural products and manufactures. Taking the average of the two years our exports to the United States of products of the farm (cereals, animals, etc.,) is 48 per cent. of the whole, of the forest 28 per cent., of the fisheries and the mine 9½ per cent. each, of manufactures 3½ per cent., and of miscellaneous articles 1½ per cent. On the other side, the exports of the United States farm products to Canada is 54½ per cent. of the whole, of manufactures 27 per cent., of products of the mine 13 per cent., of the forest 4½ per cent., and of the fisheries and all other articles one per cent. The principal exports of farm products from Canada to the United States consist of horses, horned cattle and barley, which together make a total of nearly $12,000,000, while the principal exports of the United States to Canada of the same class consist of corn, wheat and cotton. With the exception of corn and cotton, however, the great bulk of United States grain and breadstuffs exported to Canada is either re-exported or takes the place of Canadian products shipped to British markets, and to get a proper knowledge of this trade tables XII and XIV should be read together.

It has been stated that the exports of Canada and the United States to each other, as given in table XIV are those of merchandise the growth, produce or manufacture of each country, and it might be supposed that this class of exports together with exports

of merchandise in transit would show the full extent of the trade between the two countries. But such is not the case, for on comparing the corresponding tables of imports it will be seen that a considerable divergence exists. Thus the Dominion returns show that domestic and foreign goods to the value of $34,783,251 were exported from Canada to the United States (exclusive of the estimated amount short returned at inland ports) during the fiscal year 1885, whereas the American returns for the same period show the value of goods imported from Canada to be $36,695,685. For 1886 the Canadian statement of total exports (foreign and domestic) to the United States shows a value of $33,747,471, and the American returns of imports from Canada a value of $37,300,036. There is a still greater disparity between the returns of the two countries in the value of goods coming into Canada from the United States. In 1885, according to the United States returns, there was exported to Canada $38,245,634 worth of domestic and foreign produce, while the Dominion returns of imports for the same period from the United States give a total of $47,151,210. For 1886 the figures are $33,462,800 and $44,858,039 respectively, so that for the two years our customs returns acknowledge the receipt of goods from the United States exceeding in value the statement of exports to Canada by 28 per cent. This difference is doubtless largely accounted for by a fact to which the chief of the United States Bureau of Statistics draws attention in his reports for 1885 and 1886, viz., that there is no law in that country which compels railway companies to furnish returns of goods passing over their lines into foreign countries. "The officers of companies of railroads leading into Mexico, and of several important routes leading into Canada," he states, "utterly refuse to give collectors of customs any data in regard to the exports over their roads, claiming that they are not required by law to do so." Hence it becomes necessary to study the trade between the two countries with the help of returns of imports, making such allowance as is possible for goods not the produce of the respective countries. Table XV has been prepared for this purpose, showing by classes of industries (1) the total imports of Canada for the fiscal year 1886, (2) its imports from the United States, and (3) the imports of the United States from Canada. Following is a summary of this table :

Classes of Products.	Canada's total imports.	Canada's imports from United States.	United States' imports from Canada.
	$	$	$
The Mine	8,126,238	7,389,746	1,568,442
The Fisheries	858,114	429,314	2,046,980
The Forest	1,007,286	996,189	8,988,668
Animals and their produce	7,363,443	5,113,260	8,447,080
Agricultural products	15,810,994	9,373,884	10,615,963
Manufactures	60,082,191	17,822,580	1,386,697
Miscellaneous	2,743,871	1,693,678	4,256,206
Totals	95,992,137	42,818,651	37,304,036

In the products of the mine the statement of Canadian imports shows an excess of $2,500,000 over the corresponding statement of United States exports, the greater part of which is made in the single item of coal. But these and like discrepancies will readily appear upon making a careful comparison of tables XIV and XV in detail, and only by such study of them can the subject be fully understood.

The value of dutiable goods which entered Canada from the United States in 1885 was $31,231,947 and of free goods $15,919,254 ; in 1886 the value of dutiable goods was $29,659,876 and of free goods $15,198,163. The American tables give the values of dutiable and free goods in totals from all countries only.

Loan Companies and Building Societies.—Table xvii presents a summary statement of operations for the six years 1880-5 of Loan Companies and Building Societies which are doing business in Ontario. The table shows the total number of societies and the number making returns, the aggregate amount of the subscribed and paid up capital of those making returns, the amount of deposits and other liabilities, the character and value of the various assets, and the amount of business transacted for each year. The figures are taken from the statutory statements which are made annually by the companies to the Department of Finance at Ottawa, but it will be observed that for each of the several years from four to nine companies out of the total number in operation have failed to make returns. During the last three years of the table (1883-5), in which the same number of societies made returns, the amount of subscribed capital in the various companies increased from $66,119,614.57 to $69,499,843.40, or $3,380,228.83, and the paid up capital from $28,028,625.18 to $29,526,934.72, or $1,498,309.54. During the same period the value of the assets increased from $79,555,476.56 to $88,548,613.14, or $8,993,138.58, and the liabilities from $79,423,895.23 to $88,952,054.35, or $9,528,159.12. The repayments of principal and interest by borrowers in 1885 exceeded the amount of the new loans by $43,926.67, the amount loaned being practically an average of the yearly loan business for the whole period. Of the deposits made in 1885 the amount standing to the credit of depositors at the end of the year shows an increase of $386,288.47 over that of the previous year, in both of which years deposits exceeded withdrawals, but in 1883 the withdrawals exceeded deposits by $137,415.15. The amount at the close of each year to the credit of depositors rose from $13,161,505.66 in 1883 to $14,824,212.25 in 1885, or an increase of $1,662,706.59. Of $80,005,918.51 of loan assets, $77,191,165.80 is on real estate, and $74,564,844.78 of this is secured by mortgage deeds. The number of mortgages on which proceedings were taken in 1885 is greater than for either of the two years immediately preceding, but is considerably less than in either of the first three years 1880-82.

For the purpose of enabling a fair comparison to be made of the growth of business of building societies, table xvi has been prepared from the returns of a number which have reported annually for a much longer period than those whose returns are embraced in Table xvii. The following companies have so reported since 1877:

Commercial Building and Investment Society	Toronto.
Imperial Loan and Investment Company	Toronto.
Freehold Loan and Savings Company	Toronto.
Union Loan and Savings Company	Toronto.
Canada Permanent Loan and Savings Company	Toronto.
Western Canada Loan and Savings Company	Toronto.
Building and Loan Association	Toronto.
Farmers' Loan and Savings Company	Toronto.
Peoples' Loan and Deposit Company	Toronto.
Huron and Erie Loan and Savings Company	London.
Dominion Savings and Investment Society	London.
Agricultural Savings and Loan Company	London.
Canadian Savings and Loan Company	London.
London Loan Company of Canada	London.
Hamilton Provident and Loan Society	Hamilton.
Omnium Securities Company	Hamilton.
Landed Banking and Loan Company	Hamilton.
Metropolitan Loan and Savings Company	Ottawa.
Southern Loan and Savings Company	St. Thomas.
Ontario Building and Savings Society	Kingston.
Frontenac Loan and Investment Society	Kingston.
Lambton Loan and Investment Company	Sarnia.
Royal Loan and Savings Company	Brantford.
Oxford Permanent Loan and Savings Society	Woodstock.
Security Loan and Savings Company	St. Catharines.
Ontario Loan and Savings Company	Oshawa.
Midland Loan and Savings Company	Port Hope.
Guelph and Ontario Investment and Savings Society	Guelph.

Table xvi exhibits the operations of these twenty-eight companies during the nine years for which they have made complete returns. During this period the subscribed stock of these companies increased from $13,839,209 to $21,181,881.40. The assets and

the liabilities in the same time were very nearly doubled, the former having risen from $23,403,922.85 to $46,490,190.40 and the latter from $23,403,942.85 to $46,496,503.69. The amount of loans secured on real estate increased from $22,224,603.64 in 1877 to $43,208,765.28 in 1885; the amount loaned from $8,390,724.05 to $9,502,519.06; the amount received from borrowers from $5,675,207.63 to $8,991,415.98; the amount received from depositors from $7,715,594.32 to $14,665,490.18, and the amount repaid to depositors from $6,753,390.48 to $13,795,802.79. The amount of dividend declared in the year grew from $981,163.11 in 1877 to $1,376,714.52 in 1885. The statement of amount borrowed for investment as well as of amount invested and secured by mortgage deeds for 1879 is obviously intended for the transaction of that year, not the whole of the amounts so borrowed and invested; and it seems probable that in the returns of some of the societies for two or three succeeding years the sense of these items continued to be misapprehended.

STATISTICS OF

SCHOOLS, POPULATION, TRADE, ETC.

SCHOOLS.

TABLE No. I.—Statistics of the High, Public and Separate

Year.	Population between 5 and 16 years.	High Schools.								Public					
		Number of Schools.	Number of pupils on roll of all ages.	Average attendance.	Number of teachers employed.	Total salaries paid.	Average salary paid.	Total expenditure for school purposes.	Expenditure per capita of Average attendance.	Number of schools.	Number of pupils on roll of all ages.	Average attendance.	Number of teachers employed.		
													Male.	Female.	Total.
						$	$	$	$ c.						
1842..	141,143	25	.....	.....	.....	.....	.....	.....	.....	1,721	65,978	.....	.....	.....	.....
1843*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1844..	183,539	25	.....	.....	.....	.....	.....	.....	.....	2,610	96,756	.....	.....	.....	.....
1845..	202,913	31	.....	.....	.....	.....	.....	.....	.....	2,736	110,002	.....	.....	.....	2,860
1846..	204,580	32	.....	.....	.....	.....	.....	.....	.....	2,589	101,912	.....	.....	.....	2,925
1847..	230,975	32	1,000	.....	.....	.....	.....	.....	.....	2,727	124,829	.....	2,365	663	3,028
1848..	241,102	33	1,115	.....	.....	.....	.....	.....	.....	2,800	130,739	.....	2,507	670	3,177
1849..	253,364	39	1,120	.....	.....	.....	.....	.....	.....	2,871	138,465	.....	2,505	704	3,209
1850..	259,258	57	2,070	.....	.....	.....	.....	.....	.....	2,959	151,891	52,630	2,597	779	3,376
1851..	258,607	54	2,191	.....	.....	.....	.....	.....	.....	2,985	168,159	58,053	2,551	826	3,377
1852..	262,755	60	2,343	.....	.....	.....	.....	.....	.....	2,992	179,587	61,862	2,541	847	3,388
1853..	268,957	64	3,221	.....	.....	.....	.....	.....	.....	3,093	194,736	67,112	2,501	938	3,439
1854..	277,922	64	4,287	.....	92	43,490	473	47,033	.....	3,200	204,168	71,679	2,508	1,031	3,539
1855..	297,623	65	3,726	.....	95	46,255	487	54,140	.....	3,284	222,979	78,043	2,531	977	3,508
1856..	311,316	61	3,386	.....	90	47,659	529	63,023	.....	3,391	243,935	85,377	2,562	1,032	3,594
1857..	324,888	72	4,973	.....	107	57,552	538	76,707	.....	3,631	262,673	92,936	2,727	1,244	3,971
1858..	360,578	75	4,459	.....	112	52,940	473	61,662	.....	3,772	283,692	98,491	2,901	1,183	4,084
1859..	362,085	81	4,381	.....	121	61,564	509	74,850	.....	3,848	288,598	104,653	3,037	1,050	4,087
1860..	373,589	88	4,546	.....	127	64,005	504	77,557	.....	3,854	301,104	113,348	3,019	1,100	4,119
1861..	384,980	86	4,765	.....	123	71,034	577	81,108	.....	3,910	316,287	119,711	2,960	1,219	4,179
1862..	403,302	91	4,982	.....	131	73,211	559	86,244	.....	3,995	329,033	128,714	3,028	1,216	4,244
1863..	412,367	95	5,352	.....	141	76,121	540	85,910	.....	4,013	344,949	131,505	3,016	1,317	4,333
1864..	424,565	95	5,589	.....	139	75,854	546	85,816	.....	4,077	354,330	141,343	2,928	1,507	4,435
1865..	426,757	104	5,754	.....	149	81,562	547	94,241	.....	4,151	365,552	148,248	2,849	1,672	4,521
1866..	431,815	104	5,719	.....	151	87,055	576	113,887	.....	4,222	372,320	149,528	2,855	1,727	4,582
1867..	447,726	102	5,696	2,712	159	94,820	596	124,181	45 79	4,261	382,719	155,368	2,767	1,913	4,680
1868..	464,315	101	5,649	2,542	161	95,848	595	117,647	46 28	4,318	399,305	160,673	2,683	2,077	4,760
1869..	470,400	101	6,608	2,924	165	97,009	588	114,502	39 16	4,359	411,746	168,722	2,681	2,145	4,826
1870..	483,966	101	7,351	3,432	172	105,153	611	137,566	40 08	4,403	421,866	171,603	2,657	2,272	4,929
1871..	489,615	102	7,490	3,745	174	113,862	654	152,880	40 82	4,438	425,126	177,923	2,557	2,510	5,067
1872..	495,756	104	7,968	4,040	239	141,812	593	210,005	51 98	4,490	433,256	178,117	2,539	2,683	5,222
1873..	504,869	108	8,437	4,460	252	165,358	656	234,215	52 51	4,562	438,911	181,067	2,490	2,883	5,373
1874..	511,603	108	7,871	4,256	248	179,946	726	286,593	67 34	4,592	441,261	181,048	2,509	2,949	5,458
1875..	501,083	108	8,342	4,499	253	184,752	730	300,741	66 85	4,678	451,568	186,800	2,556	3,182	5,738
1876..	502,250	104	8,541	4,789	266	195,906	736	304,948	63 68	4,875	465,243	199,704	2,685	3,198	5,883
1877..	494,804	104	9,229	5,287	280	211,607	756	343,710	65 00	4,955	465,908	204,635	2,915	3,219	6,134
1878..	492,360	104	10,574	6,054	298	223,010	748	396,010	65 41	4,913	463,405	211,416	2,956	3,184	6,140
1879..	494,424	104	12,136	7,099	320	241,097	753	400,788	56 46	4,932	462,233	206,369	3,052	3,198	6,250
1880..	489,924	104	12,910	7,393	335	247,894	740	413,930	55 99	4,941	457,734	207,334	3,164	3,239	6,403
1881..	484,224	104	12,136	7,424	333	257,218	772	345,850	46 59	5,043	451,449	202,252	3,257	3,291	6,548
1882..	483,817	104	12,348	6,728	332	253,864	765	343,720	51 09	5,010	445,364	200,602	2,964	3,503	6,467
1883..	478,791	104	11,843	6,454	347	266,317	767	348,946	54 07	5,058	438,192	201,856	2,732	3,782	6,514
1884..	471,287	106	12,737	7,302	358	282,776	790	385,426	52 78	5,109	439,454	207,301	2,694	3,964	6,658
1885..	†583,137	107	14,250	8,207	365	294,078	806	429,762	52 37	5,177	444,868	210,659	2,646	4,119	6,765

* No report in consequence of a change in the School Law. † Between 5 and 21 (amended Act.)

SCHOOLS.

Schools of Ontario for the forty-four years 1842-85.

Schools.				Separate Schools.										
Total salaries paid teachers.	Average salary paid.	Total expenditure for school purposes.	Expenditure per capita of average attendance.	Number of schools.	Number of pupils on roll of all ages.	Average attendance.	Number of teachers employed. Male.	Female.	Totals.	Total salaries paid teachers.	Average salary paid.	Total expenditure for school purposes.	Expenditure per capita of average attendance.	Year.
$	$	$	$											
166,000	...	...	...	...	...	...	...	...	...	...	...	...	...	1842
...	...	...	...	...	...	...	...	...	...	...	...	...	...	*1843
206,856	...	...	...	...	...	...	...	...	...	...	...	...	...	1844
286,056	100	....	....	...	...	...	...	...	...	...	...	...	...	1845
271,624	93	...	...	...	...	...	...	...	...	...	...	...	...	1846
310,396	102	....	....	...	...	...	...	...	...	...	...	...	...	1847
344,276	108	...	...	...	...	...	...	...	...	...	...	...	...	1848
353,912	110	...	...	...	...	...	...	...	...	...	...	...	...	1849
353,716	105	410,472	7 80	...	...	...	...	...	...	...	...	...	...	1850
391,308	116	468,644	8 07	16	...	...	...	...	...	...	...	...	...	1851
428,948	127	529,314	8 56	18	...	...	...	...	...	...	...	...	...	1852
489,764	142	617,836	9 20	32	...	...	...	...	...	...	...	...	...	1853
578,868	163	754,340	10 52	44	...	...	...	...	...	...	...	...	...	1854
670,988	191	885,959	11 35	41	4,885	2,076	37	20	57	9,120	160	13,313	6 41	1855
767,340	214	1,057,636	12 39	81	7,210	3,064	60	35	95	12,340	130	20,472	6 68	1856
841,489	212	1,179,790	12 59	100	9,694	4,320	60	52	112	18,743	167	32,368	7 49	1857
760,885	186	1,014,929	10 30	94	9,991	4,601	64	54	118	16,731	142	28,206	6 13	1858
836,322	205	1,079,483	10 31	105	12,994	5,208	78	70	148	23,003	155	30,563	5 87	1859
872,386	212	1,128,414	9 95	115	14,708	5,663	81	81	162	23,205	143	31,360	5 54	1860
893,585	214	1,160,477	9 70	109	13,631	6,222	71	86	157	24,528	156	30,941	4 97	1861
934,588	220	1,200,614	9 33	109	14,700	6,370	87	75	162	25,188	155	31,379	4 93	1862
962,114	222	1,220,638	9 28	120	15,859	6,531	78	93	171	25,441	149	33,809	5 18	1863
965,976	218	1,243,168	8 80	147	17,365	8,226	83	107	190	30,980	163	42,150	5 12	1864
1,007,099	223	1,309,659	8 83	152	18,101	8,518	81	119	200	33,953	170	46,220	5 43	1865
1,034,134	226	1,342,194	8 98	157	18,575	8,337	70	137	207	32,746	158	45,039	5 40	1866
1,058,686	226	1,424,560	9 17	161	18,924	8,606	82	128	210	34,830	166	48,628	5 65	1867
1,107,698	233	1,532,983	9 54	162	20,594	9,305	94	142	236	38,846	165	55,452	5 96	1868
1,136,537	235	1,568,147	9 29	165	20,684	9,331	94	134	228	38,629	169	56,750	6 08	1869
1,180,942	240	1,653,561	9 64	163	20,652	10,035	96	140	236	41,739	177	58,500	5 83	1870
1,249,083	247	1,733,476	9 74	160	21,200	10,371	84	155	239	42,393	177	69,818	6 73	1871
1,325,770	254	2,138,554	12 01	171	21,406	10,584	87	167	254	45,824	180	68,810	6 50	1872
1,470,817	274	2,521,256	13 92	170	22,073	11,123	91	178	269	49,306	183	83,270	7 49	1873
1,596,606	292	2,776,968	15 34	166	22,786	11,850	92	186	278	51,144	184	88,364	7 46	1874
1,700,074	296	2,902,453	15 54	165	22,673	11,774	89	191	280	58,026	207	90,627	7 70	1875
1,775,300	302	2,899,973	14 52	167	25,294	12,779	95	207	302	63,021	209	106,483	8 33	1876
1,867,899	305	2,853,223	13 94	185	24,952	12,549	105	229	334	70,200	210	120,266	9 58	1877
1,940,906	318	2,768,788	13 10	177	25,610	13,172	104	229	333	70,301	211	120,559	9 15	1878
1,997,657	320	2,710,253	13 13	191	24,779	13,073	101	245	346	75,165	217	122,831	9 40	1879
2,035,895	318	2,693,589	12 99	196	25,311	12,734	100	244	344	77,285	225	128,463	10 09	1880
2,030,159	310	2,720,547	13 45	195	24,819	13,012	105	269	374	75,860	203	123,724	9 51	1881
2,060,353	319	2,683,254	13 38	193	26,148	13,574	98	292	390	84,095	216	154,340	11 37	1882
2,118,485	325	2,954,818	14 64	194	26,177	13,705	97	300	397	91,702	231	153,611	11 21	1883
2,200,311	330	3,104,385	14 98	207	27,463	14,560	95	332	427	95,716	224	176,477	12 12	1884
2,226,697	329	3,108,169	14 75	218	27,590	15,248	98	355	453	100,353	222	204,531	13 41	1885

SCHOOLS.

TABLE No. II.—Summary Statistics of the High, Public and Separate Schools of Ontario for the thirty-two years 1854-85.

Year.	Population between the ages of 5 and 16 years.	High, Public and Separate Schools.						Superannuation Fund.				
		Schools in operation.	Pupils enrolled of all ages.	*Average attendance.	Teachers employed.	Salaries paid teachers.	Total expenditure.	No. on List. Male.	Female.	Total.	Total payments.	Average payments.
						$	$				$	$
1854.....	277,922	3,308	208,455	71,679	3,631	622,358	801,373	40	.....	40	3,344	84
1855	297,623	3,390	231,590	80,119	3,660	726,363	953,412	78	2	80	5,618	70
1856.....	311,316	3,533	254,531	88,441	3,779	827,339	1,141,131	122	6	128	6,535	51
1857	324,888	3,803	276,440	97,256	4,190	917,784	1,288,865	119	6	125	5,112	41
1858.....	360,578	3,941	298,142	103,092	4,314	830,556	1,104,797	147	8	155	2,663	17
1859.....	362,085	4,034	305,973	109,861	4,356	920,899	1,184,896	145	9	154	3,922	25
1860	373,589	4,057	320,358	119,011	4,408	959,596	1,237,331	143	8	151	4,085	27
1861.....	384,980	4,105	334,683	125,933	4,459	989,147	1,272,526	152	9	161	4,081	25
1862.....	403,302	4,195	348,715	135,084	4,537	1,032,087	1,318,237	154	10	164	5,438	33
1863	412,367	4,228	366,160	138,036	4,645	1,063,676	1,340,357	156	12	168	3,245	19
1864.....	424,565	4,319	377,284	149,569	4,764	1,072,810	1,371,134	146	12	158	3,611	23
1865.....	426,757	4,407	389,407	156,766	4,870	1,122,614	1,450,120	143	11	154	3,997	26
1866.....	431,815	4,483	396,614	157,865	4,940	1,153,935	1,501,120	134	11	145	3,726	26
1867	447,726	4,524	407,339	166,686	5,049	1,188,336	1,597,369	135	12	147	4,162	28
1868.....	464,315	4,581	425,548	172,520	5,157	1,242,392	1,706,082	131	12	143	5,957	42
1869.....	470,400	4,625	439,038	180,977	5,219	1,272,175	1,739,399	119	12	131	6,332	48
1870.....	483,966	4,667	449,869	185,070	5,337	1,327,834	1,849,627	118	13	131	6,376	48
1871.....	489,615	4,700	453,816	192,039	5,480	1,405,338	1,956,174	112	12	124	6,016	49
1872.....	495,756	4,765	462,630	192,741	5,715	1,513,406	2,417,369	128	13	141	11,942	85
1873.....	504,869	4,840	469,421	196,650	5,894	1,685,481	2,838,741	139	14	153	19,097	125
1874.....	511,603	4,866	471,918	197,154	5,984	1,827,696	3,151,925	171	18	189	22,910	121
1875.....	501,083	4,951	482,583	203,073	6,271	1,942,852	3,293,821	205	24	229	26,509	116
1876.....	502,250	5,146	499,078	217,272	6,451	2,034,227	3,311,404	241	25	266	31,769	119
1877.....	494,804	5,244	500,089	222,471	6,748	2,149,706	3,317,199	269	24	293	35,484	121
1878.....	492,360	5,194	499,589	230,642	6,771	2,234,217	3,285,357	307	32	339	41,319	122
1879.....	494,424	5,227	499,148	226,541	6,916	2,313,919	3,233,872	328	32	360	43,774	122
1880.....	489,924	5,241	495,955	227,461	7,082	2,361,074	3,235,982	353	38	391	38,229	123
1881.....	484,224	5,342	489,404	222,688	7,255	2,363,237	3,190,121	361	38	399	49,129	123
1882.....	483,817	5,307	483,860	220,904	7,189	2,398,312	3,181,314	381	41	422	51,000	121
1883.....	478,791	5,356	476,212	222,015	7,258	2,476,504	3,457,375	373	49	422	51,500	122
1884	471,287	5,422	479,654	229,163	7,443	2,578,803	3,666,288	388	55	443	54,234	122
1885.....	†583,137	5,502	486,708	234,114	7,583	2,621,128	3,742,462	368	55	423	55,003	130

* Average attendance for years 1854-66 does not include High Schools.

† Between 5 and 21 years of age.

AREA AND POPULATION.

TABLE No. III.—Showing by County, Township, Town, Village and City Municipalities the area (resident and non-resident) assessed in Ontario in 1886, and the Population as taken by the Municipal Assessors for the ten years 1877-86.

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
Essex:											
Anderdon...Tp.	23,363	1,980	2,048	2,152	2,064	2,045	2,003	1,962	1,875	1,816	1,637
Colchester, N "	30,293	1,527	1,515	1,394	2,040	1,702	1,514	1,326	3,861	3,484	3,315
Colchester, S "	33,861	2,434	2,414	2,486	2,434	2,386	2,461	2,535			
Gosfield..... "	57,904	3,428	3,483	3,529	3,390	3,172	3,345	3,517	3,390	2,772	3,682
Maidstone .. "	44,703	2,949	2,886	2,881	2,945	2,986	2,993	3,000	2,691	2,709	2,535
Malden ..... "	20,702	1,576	1,564	1,528	1,562	1,535	1,531	1,527	1,502	1,529	1,533
Mersea ..... "	60,887	3,356	3,407	3,485	3,558	3,300	3,143	2,986	2,841	2,702	2,500
Pelee Island. "	10,064	412	418	403	407	301	330	360	260	.....	.....
Rochester... "	32,430	2,338	2,362	2,341	2,232	2,103	2,018	1,933	2,155	1,933	1,918
Sandwich, E "	43,087	4,418	4,432	3,760	3,880	4,087	3,843	3,600	3,620	3,568	3,361
Sandwich, W "	24,891	2,647	2,548	2,459	2,362	2,420	2,366	2,311	2,370	2,370	2,360
Tilbury, W . "	48,264	3,485	4,186	4,086	3,983	3,760	3,530	3,301	3,123	2,953	2,862
Rural	430,449	30,550	31,263	30,504	30,857	29,797	29,077	28,358	27,688	25,836	25,703
AmherstburgTn.	450	2,360	2,400	2,469	2,586	2,660	2,543	2,426	2,229	2,145	1,975
Sandwich . "	2,000	1,214	1,145	1,099	1,136	1,049	1,038	1,028	1,071	1,096	1,155
Windsor ... "	2,020	7,336	7,285	7,057	6,890	6,740	6,283	5,826	6,166	6,166	6,394
Belle River . Vil.	500	693	685	700	616	625	605	585	603	502	473
Essex Centre "	650	1,503	1,200	1,123	.....	.....	.....	.....	.....	.....	.....
Kingsville. . "	449	918	962	871	843	798	822	845	840	788	.....
Leamington . "	500	1,278	1,303	1,076	1,076	1,111	1,152	1,160	1,145	967	958
Urban	6,569	15,302	14,980	14,395	13,147	12,983	12,443	11,870	12,054	11,664	10,955
Kent:											
Camden ....Tp.	40,248	2,445	2,601	2,654	2,617	2,844	2,616	2,579	2,633	2,501	2,712
Chatham ... "	83,582	4,321	4,655	4,799	4,653	4,895	4,871	5,048	4,813	4,687	4,644
Dover ..... "	70,476	3,517	3,453	3,229	3,051	3,231	3,429	3,218	3,533	3,416	3,301
Harwich .... "	87,586	4,729	4,875	4,327	4,706	4,777	4,999	5,017	4,982	4,875	4,630
Howard..... "	59,105	3,581	3,415	3,457	3,607	3,444	4,232	3,708	3,555	3,553	3,310
Orford ..... "	49,864	2,841	2,916	2,919	2,941	2,617	2,880	2,926	2,915	2,830	2,811
Raleigh .... "	70,824	4,941	4,571	4,271	4,294	4,704	4,570	4,313	4,203	4,013	3,854
Romney .... "	26,414	1,075	1,033	1,014	1,020	1,003	961	892	913	845	837
Tilbury, E .. "	54,510	2,875	3,002	3,006	2,749	2,517	2,521	2,477	2,145	2,237	2,004
Zone ..... "	25,450	1,353	1,245	1,259	1,268	1,255	1,355	1,378	1,155	1,284	1,202
Rural	568,009	31,678	31,766	30,915	30,906	31,287	32,434	31,556	30,847	30,241	29,305
Blenheim ...Tn.	608	1,305	1,462	1,125	1,125	1,050	1,010	1,341	1,199	1,038	884
Bothwell ... "	2,021	930	1,000	989	956	890	851	1,029	1,021	931	937
Chatham.... "	1,650	8,447	8,152	8,979	7,950	7,739	7,656	7,572	7,265	7,325	6,989
Dresden .... "	642	1,861	1,843	1,665	1,606	1,747	1,829	1,592	1,696	1,256	1,271
Ridgetown .. "	671	1,823	1,859	1,506	1,820	1,700	1,429	1,312	1,120	799	803
Thamesville Vil.	388	744	716	683	684	652	682	753	691	660	625
Wallaceburg . "	500	1,914	1,579	1,548	1,319	1,200	1,140	1,270	1,278	938	947
Urban	6,480	17,024	16,611	16,495	15,460	14,978	14,597	14,869	14,270	12,947	12,456
Elgin:											
Aldborough .Tp.	75,802	4,794	4,527	4,452	4,428	4,335	4,280	4,247	4,264	4,136	4,000
Bayham .... "	57,524	3,443	3,569	3,949	4,006	3,432	3,830	4,589	4,457	4,480	4,455
Dorchester,S. "	30,450	1,553	1,481	1,540	1,631	1,651	1,716	1,758	1,721	1,663	1,905
Dunwich.... "	70,899	4,001	3,649	3,213	3,644	3,629	3,649	3,858	3,697	3,902	3,886
Malahide ... "	62,417	4,014	3,951	4,031	3,876	4,013	3,861	3,985	3,863	3,929	4,311
Southwold .. "	72,227	4,262	4,282	4,289	4,219	4,399	4,442	4,454	4,598	4,538	4,533
Yarmouth .. "	69,817	4,828	4,589	4,459	4,449	4,420	5,393	5,213	5,172	4,906	4,843
Rural	439,136	26,895	26,048	25,933	26,253	25,879	27,171	28,104	27,772	27,554	27,933

Note.—Throughout this table local municipalities are given as at present constituted.

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
Elgin—*Con.*											
Aylmer.....Tn.	394	2,021	1,882	1,695	1,538	1,498	1,407	1,409	1,466	1,466	1,303
Port Stanley Vil.	416	626	552	543	582	698	650	758	755	767	707
Springfield.. "	405	492	461	487	521	527	474	400	750	750	.....
Vienna..... "	1,200	435	442	452	425	490	495	530	520	467	484
Urban	2,415	3,574	3,337	3,177	3,066	3,213	3,026	3,097	3,491	3,450	2,494
Norfolk:											
Charlotteville Tp	58,722	3,610	3,672	3,783	3,658	3,904	3,903	4,002	3,926	3,943	3,827
Houghton.. "	33,536	1,831	1,887	1,852	1,864	1,912	1,927	1,976	1,880	1,851	1,856
Middleton .. "	45,354	3,395	3,292	3,151	3,360	3,208	3,309	3,351	3,208	3,156	3,077
Townsend.. "	64,954	4,223	4,205	4,387	4,263	4,397	4,530	4,609	4,219	5,374	5,393
Walsingham. "	94,493	4,850	4,777	4,798	4,368	4,981	4,956	5,472	5,500	5,330	5,220
Windham... "	66,940	4,038	4,083	4,120	3,909	4,158	4,296	4,060	4,023	4,019	4,208
Woodhouse . "	34,463	2,430	2,419	2,399	2,350	2,495	2,600	2,531	2,444	2,393	3,539
Rural	398,462	24,377	24,335	24,490	23,772	25,055	25,521	26,001	25,200	26,066	27,120
Simcoe ....Tn.	800	3,000	3,062	3,000	3,000	3,000	2,498	2,493	2,702	3,000	2,949
Port Dover . Vil.	413	1,081	1,018	1,021	1,067	1,076	1,065	1,046	1,079	.....	.....
Waterford .. "	437	1,219	1,204	1,319	1,235	1,110	1,110	1,052	912	946	.....
Urban	1,650	5,300	5,284	5,340	5,302	5,186	4,673	4,591	4,693	3,946	2,949
Haldimand:											
Canborough .Tp.	21,469	1,071	1,052	1,050	962	1,085	1,104	1,104	1,020	981	983
Cayuga, N.. "	32,703	1,880	1,321	1,743	1,789	1,800	1,838	1,844	1,866	1,867	1,818
Cayuga, S... "	13,269	901	871	894	854	869	900	930	901	892	926
Dunn..... "	14,810	807	855	891	980	936	936	910	908	828	868
Moulton .... "	27,114	1,624	1,690	1,677	1,433	1,601	1,546	1,441	1,450	1,529	1,951
Oneida..... "	32,628	2,039	1,875	1,875	2,068	2,012	2,021	2,051	2,082	2,123	2,324
Rainham.... "	25,683	2,004	1,862	1,863	1,877	1,909	1,927	1,900	1,841	1,863	1,846
Seneca ..... "	41,807	2,461	2,333	2,293	2,337	2,323	2,469	2,345	2,740	2,758	2,793
Sherbrooke . "	4,602	427	445	445	430	457	465	480	474	461	495
Walpole .... "	66,852	4,971	4,806	4,708	4,825	5,097	5,051	5,257	5,258	5,159	4,777
Rural	280,937	18,185	17,110	17,439	17,555	18,089	18,257	18,262	18,540	18,461	18,781
Caledonia ..Vil.	546	978	907	910	886	978	1,102	1,152	1,153	1,148	1,171
Cayuga..... "	925	838	808	800	769	753	758	752	801	841	901
Dunnville... "	892	2,045	1,650	1,574	1,624	1,611	1,591	1,480	1,708	1,670	1,657
Urban	2,363	3,861	3,365	3,284	3,279	3,342	3,451	3,384	3,662	3,659	3,729
Welland:											
Bertie .....Tp.	35,346	3,763	3,800	3,751	3,700	3,661	3,460	3,211	3,407	3,425	3,320
Crowland ... "	19,230	1,172	1,204	1,213	1,221	1,253	1,185	1,166	1,120	1,112	1,149
Humberstone "	30,755	2,539	2,625	2,666	2,563	2,862	3,298	3,495	3,440	2,927	2,141
Pelham .... "	29,011	2,206	2,281	2,305	2,260	2,337	2,406	2,436	2,436	2,422	2,353
Stamford .. "	21,457	1,957	1,874	1,673	1,702	1,852	2,836	2,618	2,682	2,614	2,545
Thorold .... "	22,523	2,015	2,011	1,976	2,106	2,106	2,502	2,488	2,785	2,560	2,342
Wainfleet .. "	51,150	3,034	2,583	2,667	2,454	2,400	2,331	2,326	2,200	2,269	2,369
Willoughby . "	18,592	1,125	1,006	947	1,104	1,101	1,024	1,086	1,129	1,129	995
Rural	228,064	17,811	17,384	17,198	17,110	17,572	19,042	18,826	19,199	18,458	17,214
Niagara F.. Tn.	1,000	2,527	2,523	2,365	2,170	2,155	2,200	2,186	2,087	2,059	2,070
Thorold .... "	814	2,727	2,664	2,541	2,547	2,468	2,471	2,794	2,874	3,050	2,994
Welland .... "	800	2,113	2,113	2,149	1,872	1,781	1,876	1,972	2,500	2,600	2,466
Chippawa ..Vil.	127	551	678	706	553	608	631	651	718	814	825
Fort Erie ... "	598	789	765	707	675	562	600	619	766	842	700
Niagara Fs.,S "	290	979	940	948	873	868	.....	.....	.....	.....	.....
Port Colborne "	198	1,129	1,229	1,239	1,263	1,189	1,520	1,773	1,866	1,661	1,421
Urban	3,827	10,815	10,912	10,655	9,953	9,631	9,298	9,995	10,811	11,026	10,476

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
LAMBTON:											
Bosanquet ..Tp.	72,343	2,710	2,717	2,712	2,734	2,831	2,863	2,896	2,882	2,921	3,299
Brooke ..... "	71,037	3,028	2,624	3,227	2,966	2,933	3,005	3,080	3,039	3,068	3,059
Dawn ..... "	65,526	2,129	2,126	1,892	1,917	1,943	1,850	1,758	1,648	1,512	1,655
Enniskillen . "	81,240	2,274	2,748	2,769	2,494	2,662	2,576	2,490	2,544	2,500	2,800
Euphemia .. "	40,449	2,553	2,559	2,510	2,481	2,364	2,497	2,630	2,636	2,509	2,509
Moore ..... "	73,365	4,989	4,864	4,517	4,506	4,804	4,919	5,035	5,091	4,796	4,625
Plympton . "	76,156	4,053	4,000	3,911	3,904	4,133	4,165	4,197	4,043	4,013	4,045
Sarnia ..... "	38,392	2,136	2,203	1,889	2,094	2,027	2,202	2,377	2,363	3,402	3,558
Sombra .... "	70,890	3,386	3,404	3,358	3,289	3,188	2,988	2,788	2,739	3,042	2,708
Warwick.... "	70,000	3,486	2,955	3,333	3,427	3,597	3,649	3,701	3,674	3,411	3,638
Rural	659,398	30,744	30,200	30,118	29,812	30,482	30,714	30,952	30,659	31,174	31,896
Petrolea ....Tn.	2,700	3,836	3,806	3,656	2,889	2,906	3,081	3,257	3,094	3,303	4,024
Sarnia ..... "	1,450	5,288	5,263	5,318	5,173	4,530	4,270	4,010	4,115	4,016	3,156
Alvinston ..Vil.	470	897	967	937	925	859	750	....	.....	.....	.....
Arkona ... "	455	570	589	607	569	550	595	641	686	578	563
Forest ..... "	500	1,720	1,548	1,536	1,524	1,428	1,402	1,377	1,460	1,632	1,470
Oil Springs.. "	2,000	814	673	570	622	471	514	558	523	537	537
Pt. Edward . "	728	1,791	1,807	1,661	1,545	1,423	1,389	1,355	1,167	....	.....
Thedford .. "	470	726	732	764	750	765	711	656	592	500	.....
Watford .... "	400	1,122	1,156	1,190	1,110	1,500	1,405	1,310	985	911	911
Wyoming .. "	478	813	799	763	738	678	764	850	850	800	850
Urban	9,651	17,577	17,340	17,002	15,845	15,110	14,881	14,014	13,472	12,277	11,511
HURON:											
Ashfield ....Tp.	63,489	3,315	3,517	3,803	3,742	3,792	3,719	3,628	3,911	3,846	3,819
Colborne .. "	34,151	2,212	2,311	2,280	2,170	2,401	2,114	2,175	2,231	2,200	2,147
Goderich.... "	52,000	2,641	2,676	2,621	2,641	2,686	2,785	2,752	2,648	2,754	2,821
Grey..... "	64,441	3,769	3,841	3,728	3,821	3,887	4,026	4,047	4,207	3,942	3,942
Hay ..... "	53,216	3,920	3,422	3,343	3,357	3,396	3,486	3,495	3,644	3,543	3,463
Howick .... "	67,485	4,948	4,937	5,000	5,001	5,035	5,256	5,193	5,305	5,420	5,348
Hullett .... "	53,626	3,083	2,996	2,863	3,012	3,029	3,373	3,378	3,301	3,394	3,401
McKillop .. "	52,057	3,431	3,488	3,486	3,543	3,185	3,699	3,682	3,551	3,588	3,632
Morris..... "	55,146	3,216	3,148	3,231	3,246	3,267	3,444	3,372	3,293	3,255	3,262
Stanley .... "	43,873	2,452	2,414	2,364	2,485	2,306	2,400	2,373	2,383	2,397	2,397
Stephen .... "	56,905	4,034	3,737	3,646	3,703	3,820	3,775	3,644	3,826	3,843	4,006
Tuckersmith. "	40,890	3,009	2,984	2,972	3,117	3,100	3,248	3,317	3,161	3,128	3,096
Turnberry .. "	35,127	2,606	2,657	2,678	2,603	2,292	2,355	2,467	2,527	2,614	2,632
Usborne .... "	42,691	2,733	2,529	2,703	2,721	2,890	2,763	2,740	2,755	2,616	2,656
Wawanosh,E "	41,741	2,206	2,110	2,009	2,071	2,250	2,304	2,329	2,350	2,345	2,412
Wawanosh,W "	41,690	2,241	2,273	2,205	2,229	2,261	2,284	2,352	2,499	2,555	2,555
Rural	798,528	49,816	49,040	48,932	49,462	49,597	51,031	50,944	51,592	51,440	51,589
Clinton ....Tn.	800	2,735	2,668	2,659	2,501	2,502	2,598	2,400	2,457	2,592	2,538
Goderich.... "	1,000	3,927	4,023	3,845	3,818	4,130	4,195	4,328	4,432	4,663	5,003
Seaforth .... "	500	2,362	2,529	2,362	2,376	2,356	2,414	2,349	2,348	2,311	2,330
Wingham .. "	750	2,019	2,093	2,500	1,915	1,989	1,953	2,038	2,083	2,010	2,072
Bayfield....Vil.	1,736	546	570	705	671	694	694	632	591	580	780
Blyth ..... "	453	850	981	981	1,090	1,113	1,161	1,264	1,121	1,150	900
Brussels .... "	418	1,247	1,273	1,284	1,313	1,282	1,335	1,291	1,429	1,206	1,135
Exeter..... "	1,048	1,801	1,728	1,637	1,635	1,587	1,586	1,578	1,682	1,562	1,458
Wroxeter .. "	500	462	455	457	453	495	568	609	634	650	607
Urban	7,205	15,949	16,320	16,430	15,772	16,148	16,504	16,480	16,777	16,724	16,823
BRUCE:											
Albemarle ..Tp.	48,268	1,089	1,015	1,065	1,076	750	794	838	813	666	
Eastnor .... "	35,684	1,098	1,036	987	833	1,276	1,197	1,118	953	662	1,020
Lindsay & Bury St.EdmundsTp.	47,205	522	469	469	552						
Amabel .... "	63,234	1,936	2,008	1,936	2,066	2,045	1,862	1,680	2,090	2,090	2,032
Arran ..... "	54,064	2,770	2,806	2,883	2,759	2,974	3,237	3,501	3,573	3,573	3,470
Brant ..... "	69,615	4,553	4,617	4,257	4,533	4,631	4,687	4,743	4,783	4,799	4,743

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
Bruce—*Con.*											
Bruce ..... "	67,037	3,701	3,715	3,801	3,688	3,529	3,650	3,771	3,598	3,830	3,300
Carrick .... "	59,503	4,824	4,826	4,756	4,649	4,892	4,940	4,989	5,278	5,177	5,016
Culross .... "	56,088	3,256	3,114	3,098	3,227	3,227	3,287	3,347	3,820	3,875	3,795
Elderslie.... "	54,425	3,029	3,039	3,180	2,788	3,006	3,022	3,038	3,594	3,493	3,296
Greenock .. "	63,126	3,080	2,916	3,068	2,906	2,892	2,965	3,038	3,099	3,087	3,068
Huron .... "	57,819	4,151	3,907	3,907	4,135	4,277	4,259	4,241	4,260	4,267	3,910
Kincardine . "	59,030	3,558	3,671	3,388	3,401	3,335	3,575	3,814	4,230	4,035	4,035
Kinloss .... "	46,249	3,097	2,935	2,840	3,190	3,252	3,265	3,279	3,261	3,087	3,019
Saugeen .... "	36,177	1,901	1,974	1,890	1,855	1,911	1,841	1,771	1,824	1,841	1,821
Rural	817,524	42,565	42,048	41,525	41,658	41,997	42,581	43,168	45,176	44,482	42,525
Kincardine .Tn.	1,200	2,866	2,740	2,383	2,383	2,539	2,593	2,648	2,500	2,500	2,437
Walkerton .. "	1,200	2,800	2,821	2,709	2,370	2,652	2,612	2,572	2,396	2,537	2,431
Chesley ....Vil.	500	1,186	1,031	1,270	932	838	789	740	.....	.....	.....
Lucknow.... "	450	1,552	1,373	1,326	1,326	1,260	1,164	1,068	1,117	1,110	1,055
Paisley .... "	500	1,254	1,087	1,018	931	963	943	923	981	1,168	1,084
Port Elgin .. "	600	1,914	1,711	1,661	1,535	1,470	1,394	1,319	1,450	1,564	1,473
Southampton "	3,000	1,155	1,099	1,097	1,097	1,125	1,116	1,108	942	884	838
Tara .... .. "	500	722	678	639	623	626	688	.....	.....	.....	.....
Teeswater .. "	473	1,172	1,064	926	926	926	918	909	982	915	925
Tiverton .... "	500	644	686	560	542	536	632	728	850	834	834
Wiarton .... "	700	1,369	1,263	1,209	1,044	985	977	968	.....	.....	.....
Urban	9,623	16,634	15,553	14,798	13,709	13,920	13,826	12,983	11,218	11,512	11,077
Grey:											
Artemesia ..Tp.	69,767	3,867	3,770	3,760	3,652	3,829	3,817	3,866	3,914	3,674	3,602
Bentinck.... "	76,000	4,877	4,827	4,553	4,508	4,647	4,721	4,451	4,234	4,050	4,510
Collingwood. "	70,505	4,559	4,355	4,184	4,009	4,103	4,366	4,095	4,251	4,102	4,102
Derby ..... "	40,254	2,113	2,105	2,060	1,949	1,959	1,955	2,031	2,040	2,046	2,120
Egremont .. "	72,421	3,503	3,257	3,498	3,508	3,716	3,754	3,785	3,780	3,753	3,664
Euphrasia .. "	72,000	3,107	3,002	3,025	3,162	3,006	3,031	3,850	3,775	3,740	3,675
Glenelg .... "	68,257	3,340	3,545	3,583	3,743	3,786	3,725	3,711	3,705	3,735	3,484
Holland .... "	64,564	3,181	3,356	3,313	3,186	3,058	3,120	3,182	3,155	2,864	2,970
Keppel .... "	87,012	3,469	3,138	3,134	2,992	3,070	3,102	3,068	3,198	3,032	2,881
Normanby .. "	68,415	5,220	5,204	4,935	5,153	5,253	5,815	5,804	5,700	5,400	5,276
Osprey..... "	72,546	3,171	3,276	3 552	3,388	3,268	3,494	3,484	3,439	3,465	3,420
Proton..... "	81,030	3,381	3,139	3,198	2,855	3,093	2,906	3,053	3,230	2,672	2,120
St. Vincent . "	64,637	3,676	3,656	3,572	3,648	3,672	3,349	3,652	3,586	3,615	3,635
Sarawak .... "	10,457	869	981	990	907	865	846	709	876	755	731
Sullivan .... "	73,566	3,713	3,562	3,426	3,537	3,464	3,527	3,564	3,558	3,464	3,341
Sydenham .. "	71,840	3,972	3,961	3,949	3,825	4,045	3,860	3,756	3,822	3,795	3,814
Rural	1,063,271	56,018	55,134	54,732	54,022	54,834	55,388	56,061	56,263	54,162	53,345
Durham ....Tn.	1,100	1,040	1,086	1,051	960	1,082	1,033	984	965	886	870
Meaford .... "	1,500	2,463	2,000	2,124	1,815	1,904	1,790	1,649	1,628	1,736	1,634
Owen Sound. "	6,120	5,672	5,317	4,655	4,519	4,511	4,309	4,584	4,548	4,320	4,207
Urban	8,720	9,175	8,403	7,830	7,294	7,497	7,132	7,217	7,141	6,942	6,711
Simcoe:											
Adjala.....Tp.	45,760	2,028	2,115	2,225	2,214	2,215	2,210	2,234	2,215	2,260	2,100
Essa..... "	63,030	3,953	4,000	3,905	3,850	3,826	3,826	3,708	3,708	4,000	3,833
Flos..... "	63,400	2,975	2,787	2,601	2,605	2,451	2,383	2,353	2,229	2,148	1,936
Gwillimb'ryW"	47,026	2,573	2,668	2,704	2,500	2,417	2,871	2,676	2,438	2,483	2,511
Innisfil..... "	64,734	4,224	4,348	4,434	4,326	4,346	4,624	4,440	4,616	4,800	5,038
Medonte .... "	71,637	3,341	2,989	2,953	2,811	2,932	2,755	2,777	2,771	2,643	2,348
Nottawasaga "	91,150	5,828	5,673	5,807	5,724	5,319	5,339	5,262	5,332	5,352	5,415
Orillia & Matchedash.....Tp.	80,706	3,228	3,129	3,010	2,918	2,365	2,354	2,326	2,348	2,311	2,236
Oro ..... "	73,232	3,799	3,846	3,896	3,931	4,015	4,119	3,968	3,809	3,872	4,238
Sunnidale .. "	54,690	2,453	2,602	2,630	2,548	2,543	2,628	2,674	2,535	2,535	2,380
Tay ..... "	45,155	2,803	2,542	2,431	2,234	1,965	1,904	1,564	1,594	1,634	1,962
Tecumseth .. "	66,556	4,050	4,479	5,137	4,563	4,388	4,390	4,393	4,458	4,572	4,451

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
SIMCOE *Con.*	Acres.										
Tiny.....Tp.	77,343	3,285	3,062	2,842	2,877	2,804	2,832	2,619	2,588	2,556	2,686
Tossorontio . "	44,132	1,262	1,105	1,244	1,172	1,270	1,223	1,176	1,141	1,096	1,067
Vespra..... "	63,017	2,769	2,768	2,574	2,629	2,520	2,548	2,657	2,217	2,324	2,390
Rural	951,568	48,571	48,113	48,393	46,902	45,876	46,006	44,827	43,999	44,586	44,591
Barrie .....Tn.	2,100	4,362	5,000	4,469	4,425	4,536	4,611	4,818	4,802	4,515	4,238
Collingwood. "	4,400	5,386	5,386	5,297	5,111	4,762	4,134	4,315	4,336	4,094	3,596
Orillia..... "	1,600	3,269	3,269	3,200	3,200	2,900	2,900	2,900	2,749	2,559	2,519
Penetanguishene..... "	1,627	1,952	1,974	1,762	1,660	1,151	980	809	939	543	502
Alliston . . .Vil.	500	1,612	1,613	1,477	1,400	1,168	985	1,140	1,120	1,072	609
Bradford.... "	1,700	1,080	936	950	905	926	1,025	1,124	1,322	1,350	1,164
Midland ... "	408	1,635	1,596	1,314	859	1,264	953	806	799	948	.....
Stayner .... "	392	1,123	1,025	888	1,031	1,009	1,008	1,006	830	978	1,069
Tottenham.. "	400	547	781	.....	.....	.....	.....	.....	.....	.....	.....
Urban	13,127	20,966	21,580	19,357	18,591	17,716	16,596	16,918	16,897	16,059	13,697
MIDDLESEX:											
Adelaide....Tp.	44,294	2,964	2,969	3,108	2,788	3,119	2,980	2,832	2,786	2,774	2,724
Biddulph .. "	39,284	2,573	2,634	2,643	2,717	2,560	2,700	2,615	2,449	2,613	2,523
Caradoc .... "	62,213	4,100	4,086	4,106	4,003	4,137	3,880	3,940	3,958	3,836	4,049
Delaware .. "	23,300	1,774	1,658	1,678	1,697	1,687	1,687	1,854	1,676	1,570	1,703
Dorchester,N "	51,457	3,675	3,597	3,502	3,523	4,293	3,887	4,082	4,239	4,251	4,109
Ekfrid..... "	53,448	2,753	2,651	2,695	2,736	2,721	2,806	2,798	2,859	2,720	2,685
Lobo . ..... "	47,228	2,678	2,641	2,755	2,706	2,738	2,894	2,815	2,685	2,725	2,729
London .... "	99,959	8,933	8,250	8,717	8,659	8,750	9,503	9,645	8,917	7,946	6,936
McGillivray. "	66,718	3,583	3,857	3,931	3,613	3,526	3,685	3,763	3,578	3,645	3,587
Metcalfe.... "	36,162	1,857	1,858	1,885	1,988	2,100	2,195	2,223	2,037	2,006	2,142
Mosa ..... "	47,406	2,678	2,583	2,619	2,562	2,641	2,790	2,708	2,278	2,278	1,949
Nissouri, W. "	49,500	3,405	3,446	3,405	3,162	3,134	3,550	3,426	3,475	3,000	2,988
Westminster "	64,148	7,968	7,637	6,999	7,475	7,707	6,834	6,371	6,255	6,097	5,824
Williams, E. "	38,473	1,716	1,669	1,722	1,831	1,955	1,881	1,881	1,753	1,716	1,953
Williams, W "	35,214	1,814	1,767	1,779	1,970	1,925	1,988	1,946	1,916	1,972	2,134
Rural	758,804	52,471	51,303	51,544	51,430	52,993	53,260	52,899	50,861	49,149	48,030
Strathroy ..Tn.	2,200	3,579	3,600	3,663	3,817	3,493	3,640	3,421	3,500	3,351	3,310
Ailsa Craig..Vil.	429	763	731	740	762	730	838	899	923	874	711
Glencoe ... "	475	955	870	878	1,064	837	891	740	727	605	532
London, W.. "	500	1,544	1,544	1,494	1,825	1,679	1,603	1,578	1,329	1,140	1,188
Lucan ..... "	500	964	897	897	897	873	900	1,070	1,071	1,012	1,100
Newbury ... "	500	525	564	650	476	560	547	534	560	546	513
Parkhill .... "	500	1,632	1,543	1,557	1,716	1,471	1,522	1,561	1,604	1,626	1,626
Wardsville.. "	410	431	462	434	404	415	474	560	540	475	500
Urban	5,514	10,391	10,211	10,313	10,961	10,058	10,325	10,363	10,254	9,629	9,480
OXFORD:											
Blandford ..Tp.	29,784	1,765	1,764	1,802	1,726	1,811	1,855	1,861	1,587	1,626	1,727
Blenheim .. "	66,897	4,791	5,024	4,993	4,976	4,924	5,086	4,880	5,028	4,735	4,440
Dereham .. "	64,832	3,765	3,717	3,666	3,796	3,863	3,976	3,881	3,730	3,717	3,754
Nissouri, E.. "	46,473	2,633	2,542	2,588	2,602	2,628	2,612	2,735	2,649	2,643	2,758
Norwich, N. "	33,843	2,214	2,161	2,225	2,139	2,124	2,129	2,192	2,124	2,189	2,094
Norwich, S . "	36,591	2,800	2,783	2,744	2,766	2,682	2,615	2,646	2,535	2,558	2,551
Oxford, E .. "	34,606	1,867	1,921	2,009	1,998	2,096	2,081	2,087	2,184	2,122	2,184
Oxford, N .. "	21,071	1,304	1,344	1,449	1,425	1,533	1,461	1,400	1,392	1,342	1,400
Oxford, W.. "	25,877	2,481	2,300	2,321	2,402	2,072	2,263	2,085	2,484	2,300	2,426
Zorra, E. .. "	57,004	3,485	3,580	3,765	4,000	4,142	3,774	3,652	3,567	3,447	3,621
Zorra, W ... "	55,031	2,629	2,642	2,510	2,733	2,840	2,742	2,843	2,826	2,742	2,742
Rural	472,009	29,734	29,778	30,072	30,563	30,715	30,594	30,212	30,106	29,421	29,697
Ingersoll....Tn.	1,722	4,228	4,266	4,388	4,359	4,358	4,949	5,188	5,157	5,029	5,015
Tilsonburg.. "	2,000	2,099	2,006	1,989	1,926	1,834	1,827	1,891	1,780	1,606	1,680
Woodstock.. "	1,275	6,718	6,307	6,090	6,020	5,223	5,399	5,382	5,128	5,069	5,298

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
Oxford—*Con.*											
Embro ....Vil.	1,307	564	537	587	522	505	510	595	600	541	537
Norwich .... "	455	1,449	1,309	1,326	1,265	1,265	1,316	1,021	1,101	980	944
Urban	6,759	15,058	14,425	14,380	14,092	13,180	14,001	14,077	13,766	13,225	13,474
Brant:											
Brantford ..Tp.	71,724	6,514	6,527	6,126	6,060	5,545	5,537	5,421	5,239	5,263	5,099
Burford .... "	66,490	4,772	4,774	4,709	4,683	4,955	4,854	4,861	4,822	4,953	4,812
Dumfries, S. "	46,661	3,159	3,270	3,344	3,295	3,347	3,448	3,474	3,465	3,121	3,037
Oakland .... "	10,236	831	862	864	865	875	875	931	884	900	820
Onondaga .. "	20,595	1,334	1,317	1,344	1,294	1,369	1,431	1,414	1,438	1,491	1,620
Rural	215,706	16,610	16,750	16,387	16,197	16,091	16,145	16,101	15,848	15,728	15,388
Paris(Urban)Tn.	685	3,311	3,316	3,343	3,533	3,070	3,062	3,098	3,103	2,952	3,090
Perth:											
Blanshard ..Tp.	45,920	2,952	2,982	2,811	2,853	2,812	2,967	3,121	2,955	2,970	3,242
Downie .... "	48,333	2,778	2,713	2,765	2,878	3,187	2,928	3,095	3,170	3,346	3,137
Easthope, N. "	43,181	2,404	2,429	2,394	2,223	2,362	2,390	2,509	2,549	2,544	2,474
Easthope, S. "	23,879	1,773	1,728	1,703	1,751	1,778	1,829	1,829	1,884	1,825	1,676
Ellice ... . "	54,471	2,766	2,764	2,600	2,689	2,647	2,804	2,625	2,727	2,605	2,544
Elma ..... "	66,637	3,614	3,790	3,668	3,832	3,603	3,752	3,914	3,733	3,793	3,744
Fullarton ... "	40,282	2,313	2,465	2,421	2,403	2,399	2,469	2,528	2,549	2,560	2,520
Hibbert .... "	41,498	2,750	2,742	2,737	2,681	2,779	3,130	3,257	3,052	3,144	3,169
Logan ..... "	53,747	2,937	2,841	2,677	2,806	2,717	2,813	3,003	3,055	2,732	2,789
Mornington. "	50,056	3,334	3,216	3,258	3,199	3,250	3,586	3,968	3,799	3,848	3,757
Wallace .. . "	49,821	3,022	3,131	3,032	3,042	3,036	2,979	3,046	3,246	3,179	2,901
Rural	517,825	30,643	30,801	30,066	30,357	30,570	31,647	32,895	32,719	32,546	31,953
Listowel ....Tn.	1,223	3,000	2,702	2,577	2,578	2,409	2,462	2,696	2,663	2,625	3,140
Mitchell .... "	1,200	2,398	2,384	2,361	2,309	2,244	2,377	2,435	2,307	2,366	2,221
St. Mary's .. "	2,709	3,400	3,500	3,192	3,442	3,442	3,432	4,593	4,593	4,968	4,977
Milverton ..Vil.	496	586	693	700	662	512	669	.....	.....	.....	.....
Urban	5,628	9,384	9,279	8,830	8,991	8,607	8,940	9,724	9,563	9,959	10,338
Wellington:											
Arthur .....Tp.	64,472	3,535	3,508	3,426	3,357	3,416	3,554	3,739	3,807	3,599	3,514
Eramosa .... "	44,068	3,264	3,226	3,132	3,081	3,229	3,391	3,269	3,223	3,194	3,263
Erin ..... "	70,394	3,740	3,855	3,945	3,702	3,677	3,952	3,909	4,250	4,238	4,464
Garafraxa,W "	47,257	2,967	2,786	3,031	3,135	3,124	3,216	3,150	2,973	3,150	2,970
Guelph .... "	36,402	2,543	2,539	2,499	2,557	2,616	2,823	2,656	2,579	2,738	2,702
Luther, W .. "	50,099	1,745	1,771	1,724	1,763	1,684	1,561	1,678	1,515	1,479	1,364
Maryborough "	56,457	3,742	3,357	3,408	3,620	3,464	3,669	3,533	3,358	2,783	3,076
Minto .... "	69,312	3,828	3,631	3,520	3,628	3,798	3,919	3,898	3,903	3,946	3,911
Nichol.. ... "	26,794	1,995	1,925	2,286	2,058	2,176	2,157	2,205	2,219	2,182	2,260
Peel ..... "	74,517	4,042	3,876	3,859	4,020	4,116	4,382	4,107	4,169	4,095	4,095
Pilkington .. "	29,055	1,803	1,740	1,792	1,643	1,750	1,792	1,819	1,837	1,831	1,948
Puslinch .... "	58,545	3,573	3,297	3,298	3,266	3,283	3,258	3,466	3,370	3,300	3,470
Rural	627,372	36,777	35,511	35,920	35,830	36,333	37,674	37,429	37,203	36,535	37,037
Harriston ..Tn.	909	1,873	1,834	1,894	1,864	1,803	1,712	1,737	1,500	1,356	1,275
Mount Forest "	1,400	2,144	2,100	2,088	2,204	2,304	2,194	2,171	1,909	1,903	1,796
Palmerston.. "	919	1,855	1,855	1,716	1,699	1,727	1,743	1,759	1,555	1,601	1,601
Arthur ....Vil.	1,028	1,172	1,210	1,183	1,146	1,145	1,265	1,264	1,273	1,198	1,099
Clifford .... "	445	556	605	610	602	664	664	660	683	821	846
Drayton .... "	446	789	790	791	829	904	789	764	692	696	751
Elora ..... "	800	1,410	1,418	1,419	1,404	1,478	1,390	1,510	1,476	1,490	1,612
Erin .... "	433	561	488	556	520	503	406	.....	.....	.....	.....
Fergus..... "	980	1,703	1,631	1,663	1,659	1,661	1,732	1,783	1,688	1,701	1,741
Urban	7,360	12,063	11,931	11,920	11,927	12,189	11,895	11,648	10,776	10,766	10,721

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877
	Acres.										
WATERLOO:											
Dumfries, N. Tp.	43,858	2,742	2,597	2,656	3,489	3,359	3,583	3,283	3,409	3,341	3,161
Waterloo.... "	81,947	7,090	7,018	7,067	6,959	6,852	6,997	6,661	6,437	6,301	6,379
Wellesley .. "	66,145	5,066	5,112	4,964	5,131	5,002	4,778	5,016	4,968	5,086	4,987
Wilmot .... "	60,604	5,263	4,973	5,088	4,900	5,134	4,888	4,910	5,015	4,939	4,889
Woolwich .. "	54,158	5,157	5,108	5,109	5,175	5,075	5,193	5,040	5,090	4,966	5,046
Rural	306,712	25,318	24,808	24,884	25,654	25,422	25,439	24,910	24,919	24,633	24,462
Berlin ..... Tn.	2,885	5,343	4,886	4,473	4,326	3,906	4,079	3,911	3,946	3,893	3,780
Galt ..... "	550	6,322	6,006	5,803	5,550	5,215	4,983	4,736	4,509	4,527	4,499
Waterloo .. "	2,800	2,561	2,462	2,158	2,158	2,103	2,012	1,959	1,901	1,899	1,966
Ayr ..... Vil.	500	1,100	1,017	1,321	.....	.....	.....	.....	.....	.....	.....
Hespeler.... "	640	1,471	1,075	926	867	789	642	597	634	605	602
N. Hamburg "	951	1,270	1,308	1,119	1,289	1,238	1,151	1,135	1,118	1,277	1,207
Preston .... "	1,093	1,667	1,538	1,536	1,466	1,430	1,305	1,378	1,474	1,424	1,478
Urban	9,419	19,734	18,292	17,336	15,656	14,681	14,172	13,716	13,582	13,625	13,532
DUFFERIN:											
Amaranth .. Tp.	63,136	2,344	2,742	2,650	2,254	2,391	2,504	2,617	2,617	2,553	2,371
Garafraxa E. "	40,560	2,043	2,035	2,073	2,142	2,169	2,159	2,150	2,009	2,120	2,158
Luther, E .. "	38,906	1,626	1,542	1,514	1,539	1,438	1,357	1,458	1,317	1,285	1,185
Melancthon . "	74,613	3,139	2,947	2,377	2,599	2,506	2,514	2,522	2,436	2,500	2,465
Mono ..... "	69,017	3,375	3,424	3,517	3,317	3,618	3,510	3,401	3,520	3,442	3,662
Mulmur .... "	69,137	3,554	3,553	3,893	3,617	3,978	3,836	3,695	3,699	3,414	3,272
Rural	355,369	16,081	16,243	16,024	15,468	16,100	15,880	15,843	15,598	15,314	15,113
Orangeville .Tn.	1,800	2,409	2,409	2,365	2,381	2,413	2,523	2,633	2,453	2,416	2,480
Shelburne .. Vil.	500	1,116	1,061	947	796	708	657	606	598	....	.....
Urban	2,300	3,525	3,470	3,312	3,177	3,121	3,180	3,239	3,051	2,416	2,480
LINCOLN:											
Caistor .....Tp.	32,652	2,004	1,980	1,943	1,971	1,928	1,916	1,905	1,907	1,907	1,907
Clinton ..... "	24,986	2,105	2,105	2,061	1,906	2,017	2,091	2,165	2,142	2,782	2,782
Gainsborough "	39,323	2,604	2,538	2,617	2,506	2,612	2,615	2,618	3,016	3,016	3,016
Grantham .. "	18,964	1,955	2,023	1,932	1,863	2,087	2,083	2,079	2,451	2,451	2,451
Grimsby, N. "	15,630	1,084	1,014	928	975	2,390	2,327	2,264	2,480	2,493	2,507
Grimsby, S.. "	18,108	1,491	1,483	1,393	1,429						
Louth ..... "	18,570	1,653	1,667	1,534	1,888	1,690	1,664	1,638	1,893	1,893	1,893
Niagara .... "	22,345	1,834	1,774	1,854	1,669	1,719	1,832	1,944	2,093	2,093	2,093
Rural	190,578	14,730	14,584	14,262	14,207	14,443	14,528	14,613	15,982	16,635	16,649
Niagara ....Tn.	567	1,251	1,225	1,200	1,430	1,393	1,445	1,497	1,387	1,443	1,443
Beamsville .Vil.	540	744	759	755	705	694	692	691	640	.....	.....
Grimsby .... "	509	834	769	784	757	654	645	636	643	630	616
Merritton .. "	478	1,806	1,805	1,887	1,820	1,697	1,704	1,710	1,800	1,800	1,800
Pt. Dalhousie "	400	892	883	947	985	1,007	1,000	992	1,800	1,500	1,500
Urban	2,494	5,527	5,441	5,573	5,697	5,445	5 486	5,526	6,270	5,373	5,359
WENTWORTH:											
Ancaster....Tp.	45,734	4,225	4,242	4,184	4,101	4,213	4,465	4,460	4,386	4,196	4,206
Barton..... "	14,338	4,253	4,013	3,911	3,653	3,425	3,270	3,476	2,674	2,711	2,813
Beverley.... "	70,051	4,905	4,763	4,772	4,671	4,890	5,100	5,118	4,537	4,621	4,989
Binbrook ... "	26,288	1,682	1,633	1,598	1,521	1,511	1,643	1,629	1,536	1,532	1,545
Flamboro' E. "	33,743	2,446	2,426	2,331	2,281	2,359	2,432	2,491	2,482	3,090	2,921
Flamboro', W "	30,422	3,093	3,108	3,168	3,119	3,235	3,364	3,341	3,222	3,232	3,455
Glanford.... "	23,493	1,792	1,746	1,806	1,893	1,867	1,847	1,887	1,893	1,980	1,879
Saltfleet .... "	28,002	2,469	2,438	2,467	2,450	2,614	2,587	2,368	2,259	2,551	2,570
Rural	272,071	24,865	24,369	24,237	23,689	24,114	24,708	24,770	22,989	23,913	24,378

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
WENTWORTH—*Con*											
Dundas ....Tn.	550	3,884	3,726	3,881	4,128	4,021	3,668	3,530	3,536	3,648	3,611
Waterdown. Vil.	336	740	709	768	748	750	754	758	742	.....	.....
Urban	886	4,624	4,435	4,649	4,876	4,771	4,422	4,288	4,278	3,648	3,611
HALTON:											
Esquesing ..Tp.	65,553	4,255	4,298	4,429	4,397	4,448	4,585	4,742	4,774	4,726	4,775
Nassagaweya "	44,727	2,745	2,715	2,626	2,659	2,708	2,748	2,809	2,710	2,705	2,762
Nelson..... "	46,109	3,218	3,160	3,082	3,089	3,080	3,039	3,089	3,089	3,228	2,833
Trafalgar ... "	66,451	4,021	3,987	3,973	4,018	4,125	4,384	4,334	4,337	4,231	4,256
Rural	222,840	14,239	14,160	14,110	14,163	14,361	14,756	14,974	14,910	14,890	14,626
Milton..... Tn.	400	1,368	1,279	1,251	1,198	1,125	1,192	1,258	1,272	1,266	1,067
Oakville .... "	1,300	1,676	1,687	1,655	1,653	1,711	1,709	1,708	1,764	1,843	1,667
Acton .....Vil.	490	1,008	939	918	848	838	805	775	752	739	743
Burlington.. "	493	1,247	1,100	1,057	968	1,024	1,046	1,071	1,025	995	980
Georgetown. "	1,065	1,534	1,568	1,573	1,552	1,467	1,562	1,612	1,608	1,616	1,630
Urban	3,748	6,833	6,573	6,454	6,219	6,165	6,314	6,424	6,421	6,459	6,087
PEEL:											
Albion.....Tn.	55,784	3,290	3,161	3,118	3,112	3,186	3,189	3,172	3,295	3,346	3,465
Caledon .... "	68,449	4,004	3,821	3,684	3,641	3,617	3,568	3,954	3,903	3,839	3,895
Chinguacousy "	80,200	4,905	4,792	4,959	4,795	4,747	5,005	5,002	5,154	5,210	4,992
Toronto .... "	64,901	5,339	5,096	5,235	5,122	5,169	5,343	5,253	5,368	5,428	5,296
Toronto Gore "	19,003	1,218	1,074	1,151	1,134	1,203	1,245	1,187	1,253	1,262	1,261
Rural	288,337	18,756	17,944	18,147	17,804	17,922	18,350	18,568	18,973	19,085	18,909
Brampton ..Tn.	1,241	3,313	3,200	3,248	3,022	3,169	2,966	3,128	3,004	3,009	2,718
Bolton .....Vil.	479	701	712	643	622	549	560	559	781	790	787
Streetsville.. "	508	781	779	751	740	706	655	693	675	617	643
Urban	2,228	4,795	4,691	4,642	4,384	4,424	4,181	4,380	4,460	4,416	4,148
YORK:											
Etobicoke ..Tp.	29,188	2,922	2,924	2,953	2,855	2,787	2,728	2,694	2,615	2,580	2,576
Georgina.... "	35,237	2,362	2,327	2,228	2,245	2,245	2,232	2,116	2,116	2,082	1,948
Gwil'mbury, E"	58,272	3,927	3,341	3,349	3,620	3,725	3,892	3,639	3,814	3,836	3,800
Gwil'mbury, N"	31,195	1,759	1,870	1,770	1,815	1,823	1,953	1,770	1,718	1,624	1,447
King..... "	86,506	5,453	5,712	5,379	5,770	5,623	5,655	5,417	5,601	5,815	5,612
Markham .. "	67,043	5,302	5,228	5,220	5,146	5,355	5,600	5,388	5,536	5,466	5,674
Scarborough. "	42,929	3,990	3,900	3,769	3,721	3,896	4,082	3,753	4,104	4,236	4,180
Vaughan.... "	67,184	5,001	5,017	5,302	5,417	4,966	5,230	5,515	5,625	5,539	5,475
Whitchurch. "	59,752	3,958	3,962	4,065	3,972	4,119	4,117	4,048	4,148	4,093	3,973
York ..... "	62,091	9,300	9,160	7,689	10,374	10,319	10,939	11,153	10,981	11,298	10,365
Rural	539,397	43,974	43,441	41,724	44,935	44,858	46,428	45,493	46,258	46,569	45,050
Newmarket .Tn.	703	1,939	1,888	1,747	1,712	1,704	1,704	1,698	1,786	1,697	1,906
Parkdale.... "	500	3,577	2,961	2,588	2,110	1,854	1,183	897	776	.....	.....
Aurora .....Vil.	1,100	1,924	1,837	1,685	1,547	1,456	1,480	1,344	1,381	1,146	1,203
Holland L'g. "	1,897	503	462	485	481	536	553	616	584	542	508
Markham .. "	460	969	1,020	999	1,033	937	949	919	889	895	872
Richm'd Hill "	458	923	889	862	755	798	797	749	699	681	659
Stouffville .. "	417	1,005	950	863	871	841	805	863	755	754	718
Weston .... "	423	1,000	1,000	928	962	800	.....	.....	.....	.....	.....
Woodbridge. "	500	929	1,061	978	923	872	.....	.....	.....	.....	.....
Urban	6,458	12,569	12,068	11,135	10,394	9,798	7,471	7,086	6,870	5,715	5,866
ONTARIO:											
Brock ... ..Tp.	66,358	4,091	4,070	4,133	4,150	4,139	4,156	4,174	4,140	5,130	4,931
Mara ..... "	61,050	2,979	2,979	2,803	2,856	2,767	2,940	2,833	2,744	2,728	2,603
Pickering .. "	71,330	6,425	6,455	6,620	6,204	6,368	6,035	6,123	6,109	6,209	6,001

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
ONTARIO—*Con.*											
Rama .....Tp.	32,454	956	979	1,045	967	942	913	977	995	970	822
Reach . . . . "	63,039	4,354	4,330	4,487	4,588	4,385	4,385	4,335	4,535	4,503	4,324
Scott .... "	51,128	2,305	2,215	2,184	2,184	2,286	2,414	2,480	2,493	2,562	2,554
Scugog .... "	9,202	601	543	585	600	639	625	553	591	653	627
Thorah .... "	32,058	1,426	1,483	2,239	2,178	2,118	2,420	2,283	2,136	1,963	2,046
Uxbridge .. "	51,519	3,500	3,699	3,677	3,641	3,686	3,748	3,863	3,656	3,836	3,781
Whitby, E.. "	31,698	3,176	3,005	3,121	2,998	3,456	3,267	3,220	3,284	3,205	3,366
Whitby .... "	30,812	2,827	2,797	2,580	2,607	2,790	2,852	2,815	2,783	2,884	2,769
Rural	500,648	32,640	32,555	33,474	32,973	33,576	33,755	33,656	33,466	34,643	33,824
Oshawa ....Tn.	2,400	4,252	4,300	4,379	4,409	4,177	4,196	4,352	4,475	4,548	4,180
Whitby .... "	3,800	3,023	2,867	2,984	2,708	2,969	2,946	3,349	3,397	3,412	3,346
Beaverton ..Vil.	401	964	927	.....	.....	.....	.....	.....	.....	.....	.....
Cannington . "	467	909	962	962	951	917	903	919	887	.....	.....
Port Perry .. "	500	1,866	1,825	1,765	1,765	1,773	1,687	1,753	1,869	1,948	1,899
Uxbridge .. "	423	2,088	2,000	1,839	1,830	1,781	1,674	1,608	1,616	1,655	1,655
Urban	7,991	13,102	12,881	11,929	11,663	11,617	11,406	11,981	12,244	11,563	11,080
DURHAM:											
Cartwright. Tp.	36,804	2,095	2,121	2,070	2,054	2,218	2,255	2,014	1,978	2,060	2,065
Cavan ..... "	63,924	3,185	3,162	3,282	3,287	3,128	3,213	3,249	4,452	4,571	4,405
Clarke .... "	68,092	4,889	4,558	4,608	4,391	4,892	5,096	4,767	4,445	4,547	4,494
Darlington.. "	68,374	4,750	4,651	4,780	4,782	4,968	5,044	5,170	4,990	5,312	5,472
Hope ..... "	64,079	3,800	4,206	4,054	4,012	3,997	3,946	3,710	3,813	3,740	3,548
Manvers .... "	69,182	3,059	3,197	3,320	3,320	3,412	3,319	3,139	2,954	3,129	3,277
Rural	370,455	21,778	21,895	22,114	21,846	22,615	22,873	22,049	22,632	23,359	23,261
BowmanvilleTn.	3,000	3,689	3,583	3,695	3,618	3,567	3,462	3,255	3,237	3,155	3,243
Port Hope .. "	1,057	5,431	5,441	5,455	5,513	5,440	5,382	5,324	5,546	5,515	5,974
Millbrook ..Vil.	436	1,017	1,085	1,043	1,038	1,084	1,062	1,119	.....	.....	.....
Newcastle .. "	1,858	910	892	872	848	943	1,038	1,038	1,180	1,167	1,148
Urban	6,351	11,047	11,001	11,065	11,017	11,034	10,944	10,736	9,963	9,837	10,365
NORTHUMBERLAND:											
Alnwick ....Tp.	17,134	1,065	1,053	1,080	1,063	1,083	1,220	1,016	980	1,107	1,055
Brighton.... "	49,128	2,995	2,919	2,793	2,856	2,854	2,849	2,821	2,890	2,753	3,145
Cramahe.... "	45,804	3,065	2,935	3,031	2,925	3,114	3,181	3,080	3,147	2,800	3,000
Haldimand . "	77,133	4,669	4,669	4,537	4,586	5,087	5,185	5,185	4,527	4,527	4,797
Hamilton .. "	61,743	4,452	4,143	4,178	4,277	4,596	4,649	4,397	4,481	4,834	4,913
Monaghan, S "	18,341	1,076	1,064	993	871	900	1,072	1,077	924	959	1,028
Murray .... "	46,385	3,024	2,917	2,973	2,965	3,182	3,070	3,166	3,063	3,081	3,090
Percy ..... "	51,277	3,153	3,117	3,186	3,154	3,419	3,529	3,321	3,263	3,168	3,101
Seymour .... "	66,066	3,224	3,158	3,304	3,263	3,476	3,293	3,358	3,411	3,276	3,405
Rural	432,511	26,723	25,975	26,075	25,960	27,711	28,048	27,421	26,686	26,505	27,534
Cobourg ....Tn.	1,991	4,940	5,007	5,100	5,313	5,210	5,164	5,118	5,178	5,177	5,278
Brighton ...Vil.	2,770	1,818	1,818	1,498	1,501	1,481	1,545	1,550	1,557	1,586	1,545
Campbellford "	600	1,951	1,703	1,714	1,693	1,602	1,355	1,292	1,060	1,080	1,144
Colborne.... "	1,051	883	915	915	953	939	974	1,009	1,029	935	1,036
Hastings.... "	560	786	797	793	803	806	802	778	725	735	772
Urban ...	6,972	10,378	10,240	10,020	10,263	10,038	9,810	9,747	9,549	9,513	9,775
PRINCE EDWARD:											
Ameliasburg Tp.	42,337	3,079	2,976	3,071	3,020	2,995	3,084	3,106	3,004	3,012	3,167
Athol "	28,864	1,366	1,296	1,340	1,331	1,331	1,384	1,446	1,408	1,280	1,321
Hallowell .. "	43,478	3,175	3,038	3,117	3,117	3,124	3,217	3,342	3,446	3,515	3,463
Hillier..... "	31,609	1,759	1,773	1,785	1,957	1,791	1,842	1,921	1,985	1,954	2,075
Marysb'gh,N "	23,105	1,456	1,431	1,531	1,578	1,443	1,548	1,541	1,530	1,506	1,443

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
P. Edward—*Con*											
Marysb'gh, S Tp.	24,793	1,792	1,947	1,949	1,947	1,953	1,886	1,944	1,927	1,836	1,970
Sophiasburgh "	43,564	2,132	2,107	2,211	2,239	2,108	2,200	2,085	2,173	2,128	2,150
Rural	232,750	14,759	14,568	15,004	15,189	14,745	15,161	15,385	15,473	15,231	15,589
Picton .....Tn.	552	2,825	2,744	2,975	2,733	2,863	2,833	2,828	2,855	2,869	2,842
Wellington . Vil.	1,441	569	563	508	503	523	537	550	543	484	502
Urban	1,993	3,394	3,307	3,483	3,236	3,386	3,370	3,378	3,398	3,353	3,344
Lennox and Addington:											
Adolphust'n. Tp.	11,606	691	674	664	685	620	649	679	632	734	641
Amherst Isl'd "	14,701	1,043	1,035	1,058	1,067	1,093	1,117	1,141	1,074	1,140	1,091
Camden East "	82,925	4,796	4,796	4,464	4,174	4,040	4,142	4,243	4,678	4,433	4,133
Denbigh, Abinger & Ashby. Tp.	32,969	680	540	647	552	552	536	520	572	400	377
Ernesttown.. "	61,761	3,250	3,375	3,264	3,288	3,243	3,354	3,464	3,439	3,511	3,638
Fredericksburgh, N .. "	23,100	1,619	1,582	1,540	1,480	1,640	1,583	1,526	1,592	1,531	1,475
Fredericksburgh, S .. "	20,480	1,223	1,245	1,245	1,067	1,250	1,195	1,139	1,264	963	1,094
Kaladar and Anglesea .. "	43,785	814	936	935	904	932	895	858	858	875	796
Richmond .. "	49,574	2,481	2,526	2,590	2,518	2,676	2,477	2,278	2,550	2,620	2,868
Sheffield .... "	56,199	2,194	2,190	2,178	2,225	2,218	2,243	2,267	2,247	2,377	2,144
Rural	397,100	18,791	18,899	18,585	17,960	18,264	18,191	18,115	18,906	18,584	18,257
Napanee ....Tn.	1,250	3,414	3,300	3,062	3,558	3,323	3,313	3,302	3,101	2,894	3,127
Bath .... Vil.	2,222	539	533	525	621	637	589	542	550	520	526
Newburgh .. "	3,200	866	913	711	791	797	760	723	700	716	665
Urban	6,672	4,819	4,746	4,298	4,970	4,757	4,662	4,567	4,351	4,130	4,318
Frontenac:											
Barrie ..... Tp.	20,400	532	475	476	433	458	419	380	395	364	329
Bedford .... "	63,643	1,462	1,342	1,337	1,327	1,560	1,568	1,577	1,604	1,635	1,567
Clarendon & Miller ..... "	40,328	833	823	696	699	660	642	624	680	640	495
Hinchinbr'ke "	61,113	1,285	1,225	1,167	1,105	1,101	1,155	1,209	1,181	997	924
Howe Island "	7,663	412	411	398	384	400	396	391	384	364	373
Kennebec .. "	37,389	1,040	1,040	1,071	885	966	935	964	919	955	818
Kingston ... "	51,971	3,060	2,879	3,047	2,750	2,418	2,716	3,014	2,976	2,721	2,700
Loughboro' . "	50,994	1,808	1,891	1,498	1,849	1,904	1,855	1,807	2,124	2,060	1,909
Olden ..... "	51,398	889	842	881	877	715	728	741	792	732	677
Oso ..... "	46,720	996	786	796	938	767	779	791	783	671	800
Palmerston & Canonto ... "	50,464	772	705	712	732	728	739	750	714	893	1,013
Pittsburgh .. "	48,344	2,600	2,577	2,601	2,643	2,653	2,760	2,867	2,928	2,867	3,078
Portland.... "	52,848	2,209	2,256	2,249	2,286	2,303	2,300	2,296	2,231	2,254	2,098
Storrington . "	53,153	2,130	2,043	2,062	2,086	2,209	2,217	2,234	2,246	2,239	2,080
Wolfe Island "	30,535	1,847	1,850	1,789	1,916	1,955	1,917	1,880	1,999	2,105	1,985
Rural	666,963	21,875	21,145	20,780	20,910	20,788	21,126	21,465	21,956	21,497	20,846
Garden Isl'd Vil.	65	405	430	457	760	493	502	511	577	489	668
Portsmouth . "	150	825	900	924	807	1,066	999	932	861	865	874
Urban	215	1,230	1,330	1,381	1,567	1,559	1,501	1,443	1,438	1,354	1,542
Leeds and Grenville:											
Augusta ....Tp.	74,579	4,573	4,584	4,601	4,552	4,525	4,418	4,483	4,709	4,732	4,669
Bastard and Burgess, S . "	57,416	3,022	3,059	2,900	2,816	2,810	2,665	2,476	2,679	2,986	2,831

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
Leeds and Grenville—*Con.*	Acres.										
Crosby, N ..Tp.	42,342	1,699	1,701	1,672	1,624	1,633	1,680	1,693	1,706	1,715	1,713
Crosby, S .. "	35,561	1,689	1,765	1,668	1,683	1,816	1,865	1,834	1,938	1,915	1,915
Edwardsburg "	70,021	4,090	4,059	4,050	4,221	4,182	4,143	4,145	4,732	4,715	4,718
Elizabetht'wn "	76,868	4,394	4,464	4,166	4,166	4,201	4,214	4,471	4,320	4,320	4,183
Elmsley, S .. "	21,521	844	835	819	788	930	960	967	935	961	1,012
Escott, Front "	23,082	1,167	1,158	1,144	1,163	1,228	1,034	1,034	1,200	1,218	1,218
Gower, S.... "	21,745	849	835	888	852	921	842	883	944	925	867
Kitley ... "	49,292	1,993	2,078	2,065	2,038	2,219	2,261	2,325	2,275	2,332	2,345
Leeds and Lansdowne, F ..Tp.	56,920	3,016	3,108	3,008	3,032	2,919	3,028	3,125	3,150	3,003	3,066
do R .. "	44,841	2,246	2,312	2,176	2,239	2,199	2,401	2,286	2,286	2,428	2,393
Oxford-on-Rideau .... "	59,469	3,117	3,081	3,040	3,085	3,139	3,118	3,333	3,390	3,484	3,433
Wolford .... "	46,838	1,890	1,917	1,915	1,905	1,877	1,900	1,945	1,984	1,984	2,044
Yonge, F .. "	28,700	1,316	1,357	1,408	1,560	1,547	1,493	1,652	1,502	1,540	1,549
Yonge and Escott, Rear "	29,247	1,918	1,973	1,940	1,961	1,937	1,985	2,100	2,102	2,088	1,967
Rural	738,442	37,823	38,286	37,460	37,685	38,083	38,007	38,752	39,852	40,346	39,923
Brockville ..Tn.	1,243	8,294	8,389	8,499	7,929	7,504	7,473	7,441	7,468	6,597	6,543
Prescott .... "	640	2,946	2,848	2,842	2,842	2,893	2,930	2,968	2,872	2,693	2,747
Cardinal....Vil.	300	697	636	598	595	605	546	800	.....	.....	.....
Gananoque.. "	1,297	3,198	3,208	3,079	2,919	3,007	2,736	2,781	2,856	2,812	2,812
Kemptville.. "	363	1,203	1,128	1,169	960	899	987	1,136	1,149	1,125	1,119
Merrickville. "	716	857	834	753	675	726	719	781	819	849	884
Newboro' .. "	962	407	407	431	500	423	387	459	400	419	435
Urban	5,521	17,602	17,450	17,371	16,420	16,057	15,778	16,366	15,564	14,495	14,540
Dundas :											
Matilda ....Tp.	62,602	4,288	4,137	4,013	3,950	3,728	3,785	3,841	3,840	4,026	4,000
Mountain .. "	57,600	2,984	2,926	2,976	3,024	3,070	3,098	3,033	3,094	3,104	3,151
Williamsburg "	59,618	3,853	3,892	3,936	4,051	4,022	4,186	3,956	4,069	3,828	4,200
Winchester.. "	57,600	4,317	4,028	4,086	4,449	4,058	4,032	3,838	3,923	3,864	3,727
Rural	237,420	15,442	14,983	15,011	15,474	14,878	15,101	14,668	14,926	14,822	15,078
Iroquois ....Vil.	800	1,031	1,002	996	969	964	902	872	918	945	900
Morrisburg . "	1,067	1,993	1,802	2,000	1,681	1,708	1,704	1,797	1,806	1,531	1,558
Urban	1,867	3,024	2,804	2,996	2,650	2,672	2,606	2,669	2,724	2,476	2,458
Stormont :											
Cornwall....Tp.	64,749	4,386	3,959	3,750	3,745	3,583	3,580	3,510	3,381	3,448	3,603
Finch .... "	51,331	3,090	2,967	2,929	3,086	2,640	3,035	2,879	2,886	3,048	2,881
Osnabruck .. "	62,042	5,050	4,941	4,894	4,946	4,880	4,856	4,790	4,880	4,674	4,674
Roxborough . "	69,964	4,183	4,041	3,712	3,712	3,822	3,727	3,712	3,763	3,508	3,384
Rural	248,086	16,709	15,908	15,285	15,489	14,925	15,198	14,891	14,910	14,678	14,542
Cornwall ....Tn.	653	5,710	5,397	5,391	4,932	4,316	4,190	4,154	3,867	3,652	3,459
Glengarry :											
Charlottenb'g Tp	82,472	5,249	5,252	5,087	5,237	5,228	5,473	5,474	5,807	5,689	5,744
Kenyon .... "	78,647	4,968	4,680	4,662	4,873	4,593	4,278	4,171	4,096	4,477	4,320
Lancaster . "	56,502	4,071	4,043	4,149	3,877	4,045	4,164	4,082	4,187	4,000	4,000
Lochiel .... "	71,339	4,314	3,702	3,843	4,820	4,674	4,480	4,500	4,500	4,368	4,368
Rural	288,960	18,602	17,677	17,741	18,807	18,540	18,395	18,227	18,590	18,534	18,432
Alexandria..Vil.	361	966	966	1,200	.....	.....	.....	.....	.....	.....	.....
Prescott :											
Alfred .... ..Tp.	43,724	3,185	3,112	2,812	3,146	2,503	2,454	2,209	2,203	2,022	1,821
Caledonia .. "	43,793	1,627	1,651	1,509	1,528	1,502	1,440	1,429	1,369	1,297	1,209

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
Prescott—*Con.*											
Hawkesb'y, ETp.	56,468	4,067	3,515	3,711	3,817	3,796	3,898	4,001	3,733	3,677	3,431
Hawkesb'y, W "	24,414	1,987	1,774	1,937	1,739	1,796	1,888	1,965	1,990	2,003	1,960
Longueuil .. "	17,327	1,022	1,007	1,069	1,107	972	984	997	1,063	907	883
Plantag'net, N "	48,925	3,949	3,916	3,653	3,691	3,602	3,446	3,500	3,612	3,407	3,171
Plantag'net, S "	48,828	2,715	2,678	2,568	2,217	2,217	2,192	2,159	2,076	2,012	1,931
Rural	283,479	18,552	17,653	17,259	17,245	16,388	16,302	16,260	16,046	15,325	14,406
Hawkesbury Vil.	5,500	1,527	1,539	1,469	1,462	1,344	1,457	1,452	1,481	1,582	1,650
L'Orignal .. "	3,998	919	841	801	801	801	764	736	685	639	639
Urban	9,498	2,446	2,380	2,270	2,263	2,145	2,221	2,188	2,166	2,221	2,289
Russell:											
Cambridge..Tp.	60,000	2,747	2,150	1,791	1,680	1,613	1,471	1,339	1,400	1,228	1,205
Clarence .... "	69,839	5,318	5,720	4,825	4,477	4,297	4,059	3,889	3,882	3,592	3,717
Cumberland. "	74,075	3,806	3,607	3,490	3,485	2,642	2,509	2,506	2,650	2,721	2,708
Russell ..... "	46,413	3,117	2,763	3,029	3,029	2,813	2,833	2,786	2,669	2,788	2,748
Rural	250,327	14,988	14,240	13,135	12,671	11,365	10,872	10,520	10,601	10,329	10,378
Carleton:											
Fitzroy ....Tp.	57,852	1,966	2,196	2,621	2,437	2,651	2,798	2,448	2,656	2,440	2,500
Gloucester .. "	83,962	5,826	5,347	5,000	4,666	4,764	5,000	5,150	5,150	5,000	5,000
Goulbourn .. "	65,293	2,845	2,852	2,817	2,643	2,911	3,235	3,200	3,340	3,090	3,040
Gower, N .. "	32,895	2,173	2,121	1,939	1,939	2,394	2,388	2,266	2,149	2,302	2,283
Huntley .... "	61,412	2,333	2,357	2,307	2,312	2,326	2,393	2,457	2,481	2,438	2,466
March ..... "	28,035	948	1,011	1,035	1,048	1,163	1,122	1,038	1,042	1,042	1,053
Marlborough "	56,160	1,752	1,762	1,777	1,723	1,855	1,852	1,861	2,110	1,991	2,000
Nepean .... "	60,288	8,375	7,858	7,406	7,019	6,994	7,058	6,776	7,002	7,031	6,500
Osgoode .... "	92,435	4,387	4,309	4,263	3,837	3,995	3,995	3,799	3,921	3,885	3,685
Torbolton .. "	25,197	908	848	811	811	868	1,118	926	920	888	845
Rural	563,529	31,513	30,661	29,976	28,435	29,921	30,959	29,921	30,771	30,107	29,372
N. Edinb'gh Vil.	80	1,169	1,169	1,057	1,066	905	867	897	894	890	907
Richmond .. "	1,459	362	403	441	430	347	381	364	377	452	477
Urban	1,539	1,531	1,572	1,498	1,496	1,252	1,248	1,261	1,271	1,342	1,384
Renfrew:											
Admaston ..Tp.	65,622	2,134	2,119	2,134	2,152	2,201	2,126	2,225	2,228	2,054	2,103
Algona, S... "	26,595	734	711	679	633	621	662	604	529	498	503
Alice & Fraser "	47,983	1,560	1,582	1,561	1,569	1,552	1,607	1,441	1,557	1,504	1,517
Bagot & Blithefield .....Tp.	49,430	1,004	916	962	900	962	952	1,027	1,062	1,034	1,072
Bromley .... "	49,363	1,591	1,577	1,569	1,539	1,623	1,623	1,646	1,577	1,630	1,588
Brougham .. "	19,518	484	500	650	620	575	490	530	612	420	300
Brudenell and Lynedoch.. "	41,934	1,255	1,208	1,165	1,149	1,038	1,185	1,162	1,213	1,470	1,457
Grattan .... "	52,167	2,021	1,703	1,605	1,494	1,510	1,523	1,488	1,412	1,466	1,694
Griffith & Matawatchan ...Tp.	18,952	638	637	589	532	516	569	570	553	560	500
Hagarty, Sherwood, etc ..Tp.	56,939	1,718	1,555	1,264	1,361	1,392	1,210	1,365	1,281	1,280	1,200
Head, Clara and Maria .....Tp.	17,864	306	306	308	308	270	391	331	269	282	150
Horton ..... "	37,162	1,076	1,198	1,345	1,277	1,252	1,262	1,304	1,220	1,217	1,173
McNab .... "	62,480	3,360	3,287	3,106	3,047	3,006	2,984	2,927	2,857	2,725	2,852
Pembroke .. "	8,129	664	700	654	635	621	630	584	552	589	563
Petewawa .. "	20,246	600	420	425	423	472	547	587	593	545	553
Radcliffe and Raglan .... "	26,599	683	724	659	636	619	619	660	711	.....	.....

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
Renfrew—*Con.*	Acres.										
Rolph, Wylie, etc .....Tp.	31,487	790	606	882	519	525	577	538	530	574	493
Ross ..... "	51,242	2,353	2,300	2,123	2,269	2,213	2,080	1,697	1,423	1,778	1,817
Sebastopol .. "	26,407	644	599	562	553	537	572	537	549	530	502
Stafford ... "	21,459	998	1,053	953	1,014	951	973	987	966	915	784
Westmeath . "	68,470	2,851	2,797	2,648	2,581	2,627	2,614	2,608	2,546	2,737	2,597
Wilberforce and Algona, N.. "	61,139	1,637	2,019	1,965	1,950	1,883	2,002	2,003	2,115	2,027	2,175
Rural	861,187	29,101	28,517	27,808	27,161	26,966	27,198	26,821	26,355	25,835	25,593
Pembroke,..Tn.	584	3,666	3,290	3,272	3,286	3,000	2,804	2,886	2,824	2,865	2,741
Arnprior ...Vil.	908	2,730	2,925	3,000	2,800	2,000	1,948	1,844	1,769	1,820	1,639
Renfrew .... "	2,205	2,162	1,746	1,985	1,329	1,414	1,483	1,282	1,199	1,112	1,306
Urban ..	3,697	8,558	7,961	8,257	7,415	6,414	6,235	6,012	5,792	5,797	5,686
Lanark:											
Bathurst ...Tp.	61,401	2,513	2,600	2,555	2,587	2,617	2,677	2,736	2,806	2,830	2,828
Beckwith ...Tp.	56,916	1,673	1,632	1,659	1,663	1,750	1,791	1,832	1,849	1,794	2,035
Burgess, N.. "	33,324	1,029	950	936	1,035	1,058	1,034	1,010	1,154	1,190	1,181
Dalhousie, Sherbrooke, N.. "	70,681	2,075	2,012	2,050	2,689	2,471	2,458	2,444	2,391	2,438	2,416
Lavant ..... "	44,342	674	589	556							
Darling .... "	41,544	632	628	620	651	647	694	742	702	677	690
Drummond . "	55,269	2,062	2,149	2,134	2,094	2,137	2,188	2,240	2,134	2,168	2,058
Elmsley, N.. "	28,431	1,035	1,009	1,109	1,112	1,141	1,130	1,118	1,156	1,138	1,152
Lanark .... "	56,250	1,759	1,785	1,639	1,752	1,717	1,747	1,777	1,832	1,835	1,834
Montague .. "	61,925	2,535	2,194	2,090	2,240	2,126	2,158	2,190	2,156	2,166	2,068
Pakenham .. "	57,397	1,816	1,759	1,801	1,866	1,804	1,792	1,780	1,773	1,730	1,780
Ramsay .... "	61,345	2,397	2,465	2,365	2,416	2,203	2,377	2,550	2,546	2,538	2,546
Sherbrooke,S "	31,582	874	856	849	841	742	782	823	834	796	758
Rural .. .	660,407	21,074	20,628	20,363	20,946	20,413	20,828	21,242	21,333	21,300	21,346
Almonte ....Tn.	700	2,972	2,859	2,842	2,906	2,632	2,631	2,633	2,516	2,529	2,570
Perth ..... "	1,000	3,774	3,774	3,780	3,202	2,730	2,755	2,780	2,803	2,845	2,745
Smith's Falls "	600	2,248	2,227	2,086	2,009	2,003	1,980	1,957	1,804	1,800	1,853
Carleton Pl.Vil.	550	3,336	2,938	2,707	2,452	1,915	1,800	1,688	1,669	1,834	1,873
Lanark .... "	2,943	745	715	705	687	689	666	642	705	654	678
Urban	5,793	13,075	12,513	12,120	11,256	9,969	9,832	9,700	9,497	9,662	9,719
Victoria:											
Bexley.....Tp.	28,486	694	742	677	640	711	844	659	692	677	559
Carden and Dalton .... "	45,421	1,114	1,174	1,140	1,130	1,202	995	1,203	1,051	1,191	1,346
Eldon ..... "	61,975	2,926	2,824	2,858	3,111	2,888	3,008	3,296	3,238	3,005	3,079
Emily .. "	60,014	2,340	2,303	2,366	2,366	2,434	2,382	2,554	2,489	2,529	2,470
Fenelon .... "	51,956	2,669	2,687	2,652	2,784	2,806	2,811	2,733	2,722	2,652	2,842
Laxton, Digby & Longford...Tp.	68,893	779	828	809	771	801	796	794	789	771	758
Mariposa ... "	73,945	4,618	4,673	4,719	5,397	5,397	5,216	4,910	4,795	4,809	4,981
Ops..... "	55,524	3,101	3,011	2,861	2,850	2,766	2,804	2,781	2,895	2,856	3,077
Somerville .. "	62,245	1,276	1,276	1,251	1,251	1,187	1,359	1,282	1,432	1,342	1,173
Verulam .... "	55,200	2,046	2,028	2,041	2,041	2,161	2,195	2,230	2,009	2,109	2,112
Rural	563,659	21,563	21,546	21,374	22,341	22,353	22,410	22,442	22,112	21,941	22,397
Lindsay ....Tn.	1,600	5,512	5,250	5,388	5,251	5,120	5,365	5,324	5,521	5,591	5,374
Bobcaygeon.Vil.	500	811	811	811	872	713	710	717	669	752	714
Fenelon Falls "	460	1,300	1,312	1,208	1,144	1,050	1,017	965	921	1,038	957
Omemee .... "	401	667	683	713	665	650	689	774	821	835	803
Woodville .. "	482	556	523	474	.....	.....	.....	.....	.....	.....	.....
Urban	3,443	8,846	8,579	8,594	7,932	7,533	7,781	7,780	7,932	8,216	7,848

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
PETERBOROUGH :											
Asphodel ...Tp.	37,723	1,628	1,739	1,813	1,761	1,741	1,687	1,792	1,846	1,958	2,629
Belmont and Methuen .. "	75,616	1,896	1,736	1,639	1,632	1,580	1,643	1,740	1,626	1,652	1,553
Burleigh, Anstruthers, etc "	68,128	1,326	1,187	1,254	1,295	1,279	1,307	1,296	1,070	1,084	941
Douro .... "	38,279	2,092	2,004	1,982	1,889	1,926	1,862	2,146	2,129	1,923	1,654
Dummer .... "	64,874	2,076	2,019	1,987	1,951	1,936	2,012	1,980	1,839	1,777	1,759
Ennismore .. "	17,227	859	974	969	980	1,002	1,033	1,077	1,023	884	1,038
Galway and Cavandish . "	30,942	690	693	719	655	648	716	692	534	574	501
Harvey .... "	60,831	1,076	1,016	979	964	954	934	979	1,021	932	947
Monaghan, S "	13,920	787	779	792	750	743	740	742	771	870	837
Otonabee ... "	64,926	3,680	3,737	3,741	3,661	3,607	3,739	3,766	3,685	3,525	3,480
Smith .... "	57,213	2,667	2,730	2,749	2,714	2,729	2,732	2,772	2,777	2,734	2,732
Rural	529,679	18,777	18,614	18,624	18,252	18,145	18,405	18,982	18,321	17,913	18,071
Peterboro' ..Tn.	1,282	8,159	8,101	7,622	7,832	7,010	6,752	6,495	6,606	6,825	6,875
Ashburnham Vil.	953	1,406	1,396	1,308	1,308	1,292	1,299	1,205	1,251	1,245	1,296
Lakefield ... "	500	1,139	1,085	1,087	996	981	987	976	911	816	902
Norwood.... "	442	958	746	747	756	760	767	750	813	821	....
Urban	3,177	11,662	11,328	10,764	10,892	10,043	9,805	9,426	9,581	9,707	9,073
HALIBURTON :											
Lutterworth. Tp.	23,718	494	395	483	379	488	491	515	525	582	900
Anson and Hindon .... "	14,498	293	277	256	252	329	322	342	342	237	
Cardiff..... "	24,199	529	534	486	502	499	515	483	389	339	698
Glamorgan.. "	17,145	410	345	491	496	486	864	789	695	583	
Monmouth.. "	14,024	390	262	363	377	397					
Minden .... "	36,497	1,184	1,090	1,045	1,052	1,019	1,075	1,148	993	1,099	1,090
Snowdon.... "	36,269	707	755	695	730	848	540	540	722	599	537
Stanhope and Sherborne.. "	20,128	487	473	590	423	479	495	486	473	463	417
Dysart, etc.. "	373,526	895	915	965	876	891	914	1,013	926	861	856
Rural	560,004	5,389	5,046	5,374	5,087	5,436	5,216	5,316	5,065	4,763	4,500
HASTINGS :											
Carlo&MayoTp.	31,832	878	855	947	714	814	869	925	939	814	725
Elzevir and Grimsthorpe "	60,064	1,170	1,099	1.213	1,130	1,115	1,132	1,150	1,208	1.199	1,111
Faraday and Dungannon. "	67,570	1,171	1,041	1,002	950	936	920	904	853	690	572
Hungerford . "	85,477	4,088	3,903	3,820	3,782	3,810	4,005	4,200	4,465	4,500	4,540
Huntingdon. "	55,534	2,271	2,189	2,222	2,187	2,345	2,377	2,408	2,674	2,624	2,750
McClure, Wicklow and B..Tp.	27,399	692	570	521	575	580	612	644	598	592	381
Herschel and Monteagle . "	48,669	1,135	1,183	970	970	985	982	979	871	872	872
Madoc..... "	57,718	2,512	2,647	2,653	2,675	2,823	2,700	2,576	2,516	2,473	2,858
Mmra&Lake"	104,802	1,791	1,890	1,821	1,829	1,667	1,711	1,755	1,849	1,742	1,632
Rawdon .... "	67,483	2,939	2,886	2,888	2,775	2,898	2,910	2,923	2,912	2,968	3,151
Sidney..... "	69,213	3,791	3,846	3,922	3,566	3,465	3,698	3,930	3,812	3,667	3,774
Thurlow .... "	53,192	4,374	4,369	4,429	4,328	4,271	4,392	4,513	4,530	4,500	4,400
Tudor, Limerick and Cashel . "	99,807	1,407	1,299	1,170	1,057	1,446	1,501	1,557	1,355	1,268	1,212
Wollaston .. "	35,139	670	643	507	510						
Tyendinaga . "	79,271	4,408	4,299	4,317	4,373	4,910	4,759	4,609	4,647	4,556	4,781
Rural	943,170	33,297	32,719	32,402	31,421	32,065	32,568	33,073	33,229	32,465	32,759
Trenton ....Tn.	1,800	4,500	4,300	3,200	3,320	3,100	2,726	2,353	2,183	2,189	2,522
Deseronto ..Vil.	335	2,263	2,213	1,864	1,708	1,535	1,331	1,128	1,160	1,004	1,008

TABLE No. III.—AREA AND POPULATION.—*Continued.*

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
Hastings—*Con.*											
Madoc ....Vil.	467	1,021	1,025	1,557	1,193	1,049	1,063	1,077	865	658	.....
Stirling .... "	800	776	825	796	825	834	814	795	791	785	677
Urban	3,402	8,560	8,363	7,417	7,046	6,518	5,934	5,353	4,999	4,636	4,207
Muskoka:											
Brunel.. ..Tp.	38,697	590	628	631	617	634	624	666	696	618	550
Cardwell.... "	25,059	385	408	380	268	243	246	316	190	196	803
Watt ..... "	33,917	844	800	795	757	750	755	757	747	758	
Chaffey .... "	42,304	863	978	999	1,041	.....	.....	.....	.....	.....	.....
Draper .... "	39,204	987	931	903	916	902	1,237	1,073	850	844	1,078
Oakley..... "	19,746	330	299	303	275	261					
Ryde ..... "	25,794	669	639	635	617	607	623	525	516	441	
McLean and Ridout .... "	37,433	692	686	610	704	695	700	677	721	571	571
Macaulay .. "	38,640	823	817	762	739	890	890	937	948	797	735
Medora and Wood..... "	43,873	781	760	736	705	664	675	627	612	498	464
Monck ..... "	25,746	619	651	554	613	576	621	680	625	548	520
Morrison.... "	21,992	637	607	658	725	660	646	636	621	621	552
Muskoka ... "	28,771	1,026	946	927	875	867	828	771	678	521	798
Stephenson.. "	40,759	816	794	823	807	877	863	920	962	848	766
Stisted..... "	47,600	664	637	642	628	624	.....	.....	.....	.....	.....
Rural	509,535	10,726	10,581	10,358	10,287	9,250	8,708	8,585	8,166	7,261	6,837
Bracebridge.Vil.	424	1,252	1,389	1,029	1,126	1,086	1,127	1,023	986	902	851
Gravenhurst. "	419	1,141	1,141	1,217	1,207	1,127	938	976	883	883	.....
Huntsville .. "	500	512	.....	.....	.....	.....	.....	.....	.....	.....	.....
Urban	1,343	2,905	2,530	2,246	2,333	2,213	2,065	1,999	1,869	1,785	851
Parry Sound:											
Armour ....Tp.	34,820	778	735	647	623	554	435	.....	.....	.....	.....
Chapman ... "	31,542	695	691	647	587	542	.....	.....	.....	.....	.....
Foley ..... "	26,627	507	516	499	488	565	563	630	661	582	520
Humphrey.. "	26,464	461	361	329	267	377	438	486	535	672	501
McDougall.. "	25,829	1,443	1,049	1,078	1,177	1,002	930	855	839	823	807
McKellar .. "	27,296	648	605	640	624	607	577	513	565	480	451
Ryerson .... "	39,271	682	645	599	593	577	532	652	.....	.....	.....
Strong..... "	35,957	800	620	537	.....	.....	.....	.....	.....	.....	.....
Rural	247,806	6,014	5,222	4,976	4,359	4,224	3,475	3,136	2,600	2,557	2,279
Algoma:											
Assiginack..Tp.	45,569	988	1,151	1,053	1,093	959	907	895	708	574	471
Carnarvon .. "	25,752	455	455	478	478	429	381	380	372	.....	.....
Gordon .... "	27,576	919	1,000	1,000	810	808	.....	.....	.....	.....	.....
Howland ... "	33,603	1,068	1,057	986	947	929	932	905	704	532	362
Oliver ..... "	26,080	225	222	245	206	172	163	.....	.....	.....	.....
St. Joseph's I'd"	28,103	655	601	656	649	256	220	194	148	141	.....
Sandfield.... "	16,119	475	446	452	438	428	462	516	.....	.....	.....
S'lt Ste. Marie "	49,729	1,830	1,795	1,885	1,700	1,655	1,700	1,705	1,660	1,460	1,320
Tehkummah. "	17,781	361	416	377	416	400	.....	.....	.....	.....	.....
Rural	270,312	6,976	7,143	7,132	6,737	6,036	4,765	4,595	3,592	2,707	2,153
Pt. Arthur..Tn.	6,400	6,097	6,097	6,097	.....	.....	.....	.....	.....	.....	.....

AREA AND POPULATION.

TABLE No. IV.—Showing by County Municipalities and groups of Counties the area assessed in Ontario in the year 1886, the population for the ten years 1877-86, and the average population (rural and urban) in 1886 per square mile of assessed land.

Counties.	Area 1886.	Population.										Average Population in 1886 per square mile assessed.		
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.	Rural	Urban.	Total.
	Acres.													
Essex	437,018	45,852	46,243	44,899	44,004	42,780	41,520	40,228	39,742	37,500	36,658	45.4	1,491	67.1
Kent	574,489	48,702	48,377	47,410	46,366	46,265	47,031	46,425	45,117	43,188	41,761	35.7	1,681	54.3
Elgin	443,001	40,596	40,542	39,921	39,482	38,736	39,050	39,264	38,480	37,450	36,381	39.2	2,269	58.6
Norfolk	400,112	29,677	29,619	29,830	29,074	30,241	30,194	30,592	29,893	30,012	30,069	39.2	2,056	47.5
Haldimand	283,300	22,046	20,475	20,723	20,834	21,431	21,708	21,646	22,202	22,120	22,510	41.4	1,046	49.8
Welland	231,891	28,626	28,296	27,853	27,063	27,203	28,340	28,821	30,010	29,484	27,690	50.0	1,809	79.0
Totals	2,369,811	215,499	213,552	210,636	206,823	206,656	207,843	206,976	205,444	199,754	195,069	40.8	1,706	58.2
Lambton	669,049	48,321	47,540	47,120	45,657	45,592	45,595	44,966	44,131	43,451	43,407	29.8	1,166	46.2
Huron	805,733	65,765	65,360	65,362	65,234	65,745	67,535	67,424	68,369	68,164	68,412	39.9	1,417	54.2
Bruce	827,147	59,199	57,601	56,323	55,367	55,917	56,407	56,151	56,394	55,994	53,602	33.3	1,106	45.8
Totals	2,301,929	173,285	170,501	168,805	166,258	167,254	169,537	168,541	168,894	167,609	165,421	34.6	1,212	48.2
Grey	1,071,991	65,193	63,537	62,562	61,316	62,331	62,520	63,278	63,404	61,104	60,056	33.7	673	38.9
Simcoe	964,695	69,537	69,693	67,750	65,493	63,092	62,602	61,745	60,896	60,645	58,288	32.7	1,022	46.1
Totals	2,036,686	134,730	133,230	130,312	126,809	125,423	125,122	125,023	124,300	121,749	118,344	33.2	883	42.3
Middlesex	767,116	88,909	87,768	87,649	87,206	87,716	87,424	86,854	84,288	81,292	79,366	44.3	2,806	74.2
Oxford	478,768	44,792	44,203	44,452	44,655	43,895	44,595	44,289	43,872	42,646	43,171	40.3	1,426	59.9
Brant	218,172	32,521	32,233	31,513	30,706	30,026	29,762	29,786	29,538	29,472	29,109	49.3	4,130	95.4
Perth	526,288	49,096	48,844	47,594	47,820	48,177	49,541	51,531	51,167	51,150	50,733	37.9	1,395	59.7
Wellington	637,942	59,056	57,658	57,974	57,947	58,376	59,626	59,337	58,051	57,219	57,438	37.5	1,349	59.2
Waterloo	316,131	45,052	43,100	42,220	41,310	40,103	39,611	38,626	38,501	38,258	37,994	52.8	1,341	91.2
Dufferin	357,669	19,606	19,713	19,336	18,645	19,221	19,060	19,082	18,649	17,730	17,593	29.0	981	35.1
Totals	3,302,086	339,032	333,519	330,738	328,289	327,514	329,619	329,505	324,066	317,767	315,404	40.8	1,741	65.7
Lincoln	196,072	30,036	29,907	29,766	29,954	29,464	30,040	30,614	32,727	33,087	32,151	49.5	1,783	98.0
Wentworth	275,657	70,769	68,789	68,102	66,761	65,831	65,107	64,067	61,535	61,072	61,500	58.5	8,193	164.3

Halton	226,588	21,972	20,733	20,564	20,382	20,526	21,070	21,398	21,331	21,349	20,713	40.9	1,167	59.5
Peel	290,565	23,551	22,635	22,789	22,188	22,346	22,531	22,948	23,433	23,501	23,057	41.6	1,377	51.9
York	553,475	174,946	167,309	158,070	147,974	141,952	136,591	132,588	131,680	127,522	122,504	52.2	5,954	202.3
Ontario	508,639	45,742	45,436	45,403	44,636	45,193	45,161	45,637	45,710	46,206	44,904	41.9	1,049	57.6
Durham	376,806	32,825	32,896	33,179	32,863	33,649	33,817	32,785	32,595	33,196	33,626	37.6	1,113	55.8
Northumberland	439,483	37,101	36,215	36,095	36,223	37,749	37,858	37,168	36,235	36,018	37,309	39.5	956	54.0
Prince Edward	234,743	18,153	17,875	18,487	18,425	18,181	18,531	18,763	18,871	18,584	18,933	40.6	1,090	49.5
Totals	3,102,028	454,195	441,795	432,455	419,406	414,841	410,706	405,968	404,117	400,535	394,697	44.6	2,950	93.7
Lennox & Addington	403,772	23,610	23,645	22,883	22,930	23,021	22,853	22,682	23,257	22,714	22,575	30.3	462	37.4
Frontenac	669,178	38,214	37,712	37,458	37,088	36,958	36,887	36,837	37,752	36,923	35,641	21.0	4,158	36.5
Leeds & Grenville	743,963	55,425	55,736	54,831	54,105	54,140	53,785	55,118	55,416	54,841	54,463	32.8	2,040	47.7
Dundas	239,287	18,466	17,787	18,007	18,124	17,550	17,707	17,337	17,650	17,298	17,536	41.6	1,037	49.4
Stormont	248,739	22,419	21,305	20,676	20,421	19,241	19,388	19,045	18,777	18,330	18,001	43.1	5,596	57.7
Glengarry	289,321	19,568	18,643	18,941	18,807	18,540	18,395	18,227	18,590	18,534	18,432	41.2	1,713	43.3
Prescott	292,977	20,998	20,033	19,529	19,508	18,533	18,523	18,448	18,212	17,546	16,695	41.9	165	45.9
Russell	250,327	14,988	14,240	13,135	12,671	11,365	10,872	10,520	10,601	10,329	10,378	38.3	.....	38.3
Carleton	566,897	65,901	65,025	62,265	56,159	56,731	56,998	55,207	56,057	56,449	55,256	35.8	6,535	74.4
Renfrew	864,884	37,659	36,478	36,065	34,576	33,380	33,433	32,833	32,147	31,632	31,279	21.6	1,482	27.9
Lanark	666,200	34,149	33,141	32,483	32,202	30,382	30,660	30,942	30,830	30,962	31,065	20.4	1,445	32.8
Totals	5,235,845	351,397	343,745	336,273	326,591	319,841	319,501	317,196	319,289	315,558	311,321	30.1	1,713	43.0
Victoria	567,102	30,409	30,125	29,968	30,273	29,886	30,191	30,222	30,044	30,157	30,245	24.5	1,644	34.3
Peterborough	532,856	30,439	29,942	29,388	29,144	28,188	28,210	28,408	27,902	27,620	27,144	22.7	2,349	36.6
Haliburton	560,004	5,389	5,046	5,374	5,087	5,436	5,216	5,316	5,065	4,763	4,500	6.2	.....	6.2
Hastings	948,172	51,933	52,082	49,286	47,945	48,604	48,540	48,413	48,219	46,213	46,078	22.6	2,384	35.1
Totals	2,608,134	118,170	117,195	114,016	112,449	112,114	112,157	112,359	111,230	108,753	107,967	19.5	2,156	29.0
Muskoka	510,878	13,631	13,111	12,604	12,620	11,463	10,773	10,584	10,035	9,046	7,688	13.5	1,384	17.1
Parry Sound	247,806	6,014	5,222	4,976	4,359	4,224	3,475	3,136	2,600	2,557	2,279	15.5	.....	15.5
Algoma	276,712	13,073	13,240	13,229	6,737	6,036	4,765	4,595	3,592	2,707	2,153	16.5	610	30.2
Totals	1,035,396	32,718	31,573	30,809	23,716	21,723	19,013	18,315	16,227	14,310	12,120	14.8	744	20.2
Cities	31,123	295,563	289,254	277,131	255,824	248,036	240,042	234,848	231,593	226,327	218,670	6,078	1,852	.....
Towns and villages	201,997	378,943	369,262	359,047	338,676	326,756	319,264	317,747	313,085	302,128	293,002	1,201		
Townships	21,758,795	1,144,520	1,126,594	1,117,866	1,115,841	1,120,574	1,134,192	1,131,288	1,128,889	1,117,580	1,108,671	33.7	.....	.....
The Province	21,991,915	1,819,026	1,785,110	1,754,044	1,710,341	1,695,366	1,693,498	1,683,883	1,673,567	1,646,035	1,620,343	.....	.....	52.9

Note.—In this table the cities are included in the respective counties within which they are situated.

AREA AND POPULATION.

TABLE No. V.—Showing by City Municipalities the area (resident and non-resident) assessed in Ontario in 1886, and the population as taken by the Municipal Assessors for the ten years 1887-86.

Municipalities.	Area 1886.	Population.									
		1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	Acres.										
Belleville (Hastings)	1,600	10,076	11,000	9,467	9,478	10,021	10,038	9,987	9,991	9,112	9,112
Brantford (Brant)	1,781	12,600	12,167	11,783	10,976	10,865	10,555	10,587	10,587	10,792	10,631
Guelph (Wellington)	3,210	10,216	10,216	10,134	10,190	9,854	10,057	10,260	10,072	9,918	9,680
Hamilton (Wentworth)	2,700	41,280	39,985	39,216	38,196	36,946	35,977	35,009	34,268	33,511	33,511
Kingston (Frontenac)	2,300	15,109	15,237	15,297	14,611	14,611	14,260	13,929	14,358	14,072	13,253
London (Middlesex)	2,798	26,047	26,254	25,792	24,815	24,665	23,839	23,592	23,173	22,514	21,856
Ottawa (Carleton)	1,829	32,857	32,792	30,791	26,228	25,558	24,791	24,025	24,015	25,000	24,500
St. Catharines (Lincoln)	3,000	9,779	9,882	9,931	10,050	9,576	10,026	10,475	10,475	11,079	10,143
St. Thomas (Elgin)	1,450	10,127	11,157	10,811	10,163	9,644	8,853	8,063	7,217	6,446	5,954
Stratford (Perth)	2,835	9,069	8,764	8,698	8,472	9,000	8,954	8,912	8,885	8,645	8,442
Toronto (York)	7,620	118,403	111,800	105,211	92,645	87,296	82,692	80,009	78,552	75,238	71,588
Total	31,123	295,563	289,254	277,131	255,824	248,036	240,042	234,848	231,593	226,327	218,670

MUNICIPALITIES.

TABLE No. VI.—Showing the number of Township, City, Town and Village Municipalities in Ontario for the ten years 1877-86.

Municipalities.	1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
Townships	445	445	445	442	438	433	430	427	424	418
Cities, Towns and Villages	206	205	204	200	201	198	193	189	182	174
Totals	651	650	649	642	639	631	623	616	606	592

PUBLIC LANDS AND TIMBER LIMITS.

TABLE No. VII.—Statistics of the Area and Value of Public Lands sold and Timber Limits under license in Ontario in the twenty years 1867-86.

Year.	Area of Lands sold.							Timber Limits.	
	Crown Lands.	Clergy Lands.	Common School Lands.	Grammar School Lands.	Total Public Lands Sold.	Value.	Average Value per Acre.	Area under License.	Accrued Dues, Rents, Bonuses, etc.
	Acres.	Acres.	Acres.	Acres.	Acres.	$	$ c.	Sq. Miles.	$
1867....	11,592	4,030	1,461	609	17,692	30,215	1 70	6,155	107,649
1868....	23,299	9,528	4,322	2,835	39,984	60,649	1 52	11,584	190,238
1869....	33,275	11,312	6,183	2,447	53,217	143,754	2 70	12,066	508,562
1870....	37,538	10,162	3,256	1,263	52,219	69,791	1 34	12,005	379,965
1871....	78,037	8,535	3,702	1,998	92,272	158,566	1 72	12,534	570,882
1872....	113,623	16,100	2,068	3,906	135,697	185,071	1 36	12,358	659,156
1873....	98,715	33,448	4,908	13,244	150,315	215,376	1 43	14,555	568,725
1874....	96,995	20,532	3,583	11,652	132,762	180,874	1 36	16,259	425,505
1875....	51,952	6,434	1,945	4,622	64,953	79,960	1 08	15,769	377,504
1876....	51,387	7,255	2,039	3,511	64,192	83,005	1 11	14,981	362,398
1877....	35,506	5,287	3,551	2,327	46,671	59,340	1 28	16,132	409,340
1878....	39,164	3,757	2,299	3,375	48,595	51,055	1 05	16,005	293,310
1879....	25,071	2,488	1,463	1,279	30,301	35,219	1 13	16,084	342,894
1880....	30,722	1,977	1,002	1,389	35,090	31,955	0 91	15,940	413,416
1881....	88,543	7,126	1,292	1,295	98,256	64,508	0 66	15,612	537,934
1882....	98,814	4,693	555	1,959	106,021	106,292	1 00	17,989	547,103
1883....	69,357	3,233	448	863	73,901	65,446	0 89	16,886	480,490
1884 ..	61,189	3,669	337	730	65,925	55,425	0 84	16,840	421,485
1885....	99,919	1,270	66	1,572	102,827	92,093	0 90	17,215	657,298
1886....	55,641	1,788	157	783	58,369	53,707	0 92	18,486	742,030
Totals.	1,200,339	162,624	44,637	61,659	1,469,259	1,822,301	1 24	.....	.....
Average annual sales..	60,017	8,131	2,232	3,083	73,463	91,115	.....	.....	.....

ASSESSMENT AND TAXATION.

TABLE No. VIII.—Showing for the five years 1881-5 the assessment of rural and urban Municipalities in the Province, the amount of local taxation levied for Municipal and School purposes, the rate of taxation per head for both purposes according to the municipal censuses and the rate on the dollar of assessed values.

Counties.		Number of ratepayers.	Number of acres.	Assessed value of—		Taxes imposed for—		Rate of taxation for Municipal and School purposes—	
				Real property.	Personal property.	Municipal purposes.	School purposes.	Per head of population.	On the dollar.
				$	$	$	$	$ c.	Mills.
ESSEX:									
1881	Rural	6,738	419,789	4,850,372	288,170	59,088	39,761	3 40	19.2
	Urban	3,480	5,742	2,775,594	184,807	36,811	20,493	4 60	19.4
	Total	10,218	425,531	7,625,966	472,977	95,899	60,254	3 76	19.3
1882	Rural	6,738	414,268	4,850,372	296,610	59,810	43,130	3 45	20.0
	Urban	3,487	5,737	2,939,090	228,567	37,524	20,677	4 48	18.4
	Total	10,225	420,005	7,789,462	525,177	97,334	63,807	3 77	19.4
1883	Rural	7,506	417,713	6,654,938	361,251	65,632	41,991	3 49	15.3
	Urban	3,882	5,724	3,077,040	192,404	44,463	19,921	4 90	19.7
	Total	11,388	423,437	9,731,978	553,655	110,095	61,912	3 91	16.7
1884	Rural	7,516	425,187	6,706,031	349,341	73,087	53,355	4 15	17.9
	Urban	4,366	6,411	3,304,398	205,339	50,595	24,462	5 21	21.4
	Total	11,882	431,598	10,010,429	554,680	123,682	77,817	4 49	19.1
1885	Rural	7,720	427,462	7,380,844	345,174	76,263	47,496	3 96	16.0
	Urban	4,489	6,585	3,642,342	279,742	50,393	25,467	5 06	19.3
	Total	12,209	434,047	11,023,186	624,916	126.656	72,963	4 32	17.1
KENT:									
1881	Rural	8,820	548,147	9,742,729	492,770	72,639	49,701	3 77	11.9
	Urban	3,949	6,522	3,672,347	411,554	35,706	32,328	4 66	16.7
	Total	12,769	554,669	13,415,076	904,324	108,345	82,029	4 05	13.3
1882	Rural	9,194	549,478	10,400,177	506,613	81,365	46,236	4 08	11.7
	Urban	4,031	6,836	4,057,185	410,520	45,912	29,170	5 01	16.8
	Total	13,225	556,314	14,457,362	917,133	127,277	75,406	4 38	13.2
1883	Rural	8,775	556,584	11,622,722	610,969	92,971	52,734	4 71	11.9
	Urban	4,340	6,564	3,871,736	415,725	52,375	30,506	5 36	19.3
	Total	13,115	563,148	15,494,458	1,026,694	145,346	83,240	4 93	13.8
1884	Rural	9,030	565,020	18,862,579	1,198,385	97,702	58,014	5 04	7.8
	Urban	4,367	6,788	4,481,858	382,245	52,288	35,534	5 32	18.1
	Total	13,397	571,808	23,344,437	1,580,630	149,990	93,548	5 14	9.8
1885	Rural	9,047	566,317	17,197,688	958,707	77,454	51,078	4 05	7.1
	Urban	4,438	6,865	4,742,643	472,540	57,705	39,614	5 86	18.7
	Total	13,485	573,182	21,940,331	1,431,247	135,159	90,692	4 67	9.7
ELGIN:									
1881	Rural	8,164	435,960	12,403,224	693,004	69,263	39,405	4 00	8.3
	Urban	881	1,750	608,183	80,309	5,950	7,619	4 48	19.7
	Total	9,045	437,710	13,011,407	773,313	75,213	47,024	4 05	8.8
1882	Rural	8,141	434,986	12,378,916	741,211	73,853	37,896	4 32	8.5
	Urban	979	2,693	617,833	83,460	6,122	6,445	3 91	17.9
	Total	9,120	437,679	12,996,749	824,671	79,975	44,341	4 27	9.0

NOTE.—The amount assessed under the head of personal property includes taxable income. Taxation for School purposes includes Municipal and Trustee assessments for High, Public and Separate Schools. Towns separated from counties for municipal purposes are included in the statistics of the counties in which they are situated.

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
				$	$	$	$	$ c.	Mills.
Elgin.—*Continued.*									
1883	Rural	8,052	435,254	12,530,197	745,517	81,480	41,528	4 69	9.3
	Urban	888	2,782	648,633	98,685	5,822	7,313	4 28	17.6
	Total	8,940	438,036	13,178,830	844,202	87,302	48,841	4 64	9.7
1884	Rural	8,032	439,469	12,537,309	792,681	77,839	41,358	4 60	8.9
	Urban	936	2,478	649,127	99,200	6,598	7,521	4 44	18.9
	Total	8,968	441,947	13,186,436	891,881	84,437	48,879	4 58	9.5
1885	Rural	8,287	440,330	12,635,833	784,804	78,525	41,894	4 62	9.0
	Urban	955	2,412	665,612	103,815	8,033	7,667	4 70	20.4
	Total	9,242	442,742	13,301,445	888,619	86,558	49,561	4 63	9.6
Norfolk:									
1881	Rural	6,721	393,799	7,670,542	546,782	34,853	33,683	2 69	8.3
	Urban	1,493	1,745	1,154,497	208,680	16,214	6,532	4 87	16.7
	Total	8,214	395,544	8,825,039	755,462	51,067	40,215	3 02	9.5
1882	Rural	6,984	390,630	7,649,225	545,735	34,145	37,183	2 85	8.7
	Urban	1,497	1,722	1,177,735	199,194	17,098	6,611	4 57	17.2
	Total	8,481	392,352	8,826,960	744,929	51,243	43,794	3 14	9.9
1883	Rural	6,847	391,390	7,993,333	592,520	34,003	36,674	2 97	8.3
	Urban	1,542	1,682	1,200,190	189,746	16,109	7,437	4 44	16.9
	Total	8,389	393,072	9,193,523	782,266	50,112	44,111	3 24	9.4
1884	Rural	6,878	395,299	8,048,760	557,316	37,917	40,646	3 21	9.1
	Urban	1,550	1,704	1,223,092	232,910	17,110	8,195	4 74	17.4
	Total	8,428	397,003	9,271,852	790,226	55,027	48,841	3 48	10.3
1885	Rural	6,971	396,804	8,658,495	674,735	37,363	36,223	3 02	7.9
	Urban	1,651	1,706	1,234,702	191,202	17,225	10,010	5 15	19.1
	Total	8,622	398,510	9,893,197	865,937	54,588	46,233	3 40	9.4
Haldimand:									
1881	Rural	4,954	280,350	6,980,184	517,981	34,726	27,947	3 43	8.4
	Urban	997	2,408	775,401	98,770	6,857	7,642	4 20	16.6
	Total	5,951	282,758	7,755,585	616,751	41,583	35,589	3 55	9.2
1882	Rural	5,059	280,613	6,927,848	506,401	33,157	30,172	3 50	8.5
	Urban	929	2,429	763,391	88,495	8,146	7,462	4 67	18.3
	Total	5,988	283,042	7,691,239	594,896	41,303	37,634	3 68	9.5
1883	Rural	4,983	281,236	6,967,423	527,290	34,294	30,019	3 66	8.6
	Urban	996	2,404	768,146	102,800	8,197	6,826	4 58	17.2
	Total	5,979	283,640	7,735,569	630,090	42,491	36,845	3 81	9.5
1884	Rural	4,989	280,515	6,975,319	548,985	37,313	31,183	3 93	9.1
	Urban	1,023	2,215	772,280	98,900	8,070	7,717	4 81	18.1
	Total	6,012	282,730	7,747,599	647,885	45,383	38,900	4 06	10.0
1885	Rural	5,043	279,036	7,196,139	549,993	34,419	32,795	3 93	8.7
	Urban	1,007	2,289	761,530	95,400	6,854	7,643	4 31	16.9
	Total	6,050	281,325	7,957,669	645,393	41,273	40,438	3 99	9.5
Welland:									
1881	Rural	5,152	223,350	6,296,764	550,045	25,849	28,790	2 87	8.0
	Urban	2,598	3,865	2,237,939	403,765	17,948	12,341	3 26	11.5
	Total	7,750	227,215	8,534,703	953,810	43,797	41,131	3 00	8.9

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
				$	$	$	$	$ c.	Mills.
Welland.—*Continued.*									
1882	Rural	5,027	220,403	6,457,899	568,772	25,074	24,251	2 81	7.0
	Urban	2,907	4,095	2,664,029	379,771	22,805	16,068	4 04	12.8
	Total	7,934	224,498	9,121,928	948,543	47,879	40,319	3 24	8.8
1883	Rural	4,975	226,580	6,513,056	571,703	21,478	22,425	2 57	6.2
	Urban	2,968	3,968	2,803,815	353,765	27,156	20,181	4 76	15.0
	Total	7,943	230,548	9,316,871	925,468	48,634	42,606	3 37	8.9
1884	Rural	4,958	227,601	6,509,805	572,181	22,418	26,132	2 82	6.9
	Urban	2,953	4,020	3,109,097	409,231	37,508	15,736	5 00	15.1
	Total	7,911	231,621	9,618,902	981,412	59,926	41,868	3 65	9.6
1885	Rural	5,123	225,085	6,606,182	598,507	25,507	26,592	3 00	7.2
	Urban	3,348	3,892	3,150,622	401,713	39,291	16,832	5 14	15.8
	Total	8,471	228,977	9,756,804	1,000,220	64,798	43,424	3 82	10.1
Lambton:									
1881	Rural	8,406	661,651	8,722,871	682,053	73,849	55,769	4 22	13.8
	Urban	3,848	8,131	2,257,182	306,477	35,935	20,987	3 83	22.2
	Total	12,254	669,782	10,980,053	988,530	109,784	76,756	4 09	15.6
1882	Rural	8,491	661,085	10,116,459	715,235	75,726	59,227	4 43	12.5
	Urban	4,194	9,571	2,585,338	308,673	47,268	22,060	4 59	24.0
	Total	12,685	670,656	12,701,797	1,023,908	122,994	81,287	4 48	14.9
1883	Rural	8,577	660,792	11,788,160	798,087	79,157	60,765	4 69	11.1
	Urban	4,541	9,949	2,771,808	336,308	54,727	31,955	5 47	27.9
	Total	13,118	670,741	14,559,968	1,134,395	133,884	92,720	4 96	14.4
1884	Rural	9,051	660,860	13,595,236	825,038	77,554	62,668	4 66	9.7
	Urban	4,592	9,945	3,217,564	723,640	57,492	23,569	4 77	20.6
	Total	13,643	670,805	16,812,800	1,548,678	135,046	86,237	4 70	12.0
1885	Rural	9,385	661,536	14,722,263	832,887	90,247	61,710	5 03	9.8
	Urban	5,176	9,579	3,853,682	689,320	81,048	27,908	6 28	24.0
	Total	14,561	671,115	18,575,945	1,522,207	171,295	89,618	5 49	13.0
Huron:									
1881	Rural	12,554	795,226	24,112,901	1,118,917	108,570	73,434	3 57	7.2
	Urban	4,592	7,011	3,421,469	457,640	44,797	24,641	4 21	17.9
	Total	17,146	802,237	27,534,370	1,576,557	153,367	98,075	3 72	8.6
1882	Rural	12,852	789,427	24,544,268	1,171,270	100,687	74,358	3 43	6.8
	Urban	4,260	6,953	3,454,173	434,200	48,713	27,060	4 59	19.5
	Total	17,112	796,380	27,998,441	1,605,470	149,400	101,418	3 71	8.5
1883	Rural	12,722	796,257	24,635,452	1,252,654	116,118	75,021	3 86	7.4
	Urban	4,358	6,942	3,437,454	444,535	47,170	27,467	4 73	19.2
	Total	17,080	803,199	28,072,906	1,697,189	163,288	102,488	4 07	8.9
1884	Rural	12,473	796,799	25,033,855	1,280,210	113,537	78,431	3 92	7.3
	Urban	4,473	7,555	3,433,653	460,980	47,249	27,303	4 54	19.1
	Total	16,946	804,354	28,467,508	1,741,190	160,786	105,734	4 08	8.8
1885	Rural	12,639	798,450	26,118,454	1,409,556	126,002	76,899	4 14	7.4
	Urban	4,593	7,067	3,410,016	463,605	49,863	28,721	4 82	20.3
	Total	17,232	805,517	29,528,470	1,873,161	175,865	105,620	4 31	9.0

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
				$	$	$	$	$ c.	Mills.
Bruce:									
1881	Rural	9,653	770,370	16,423,264	903,462	96,639	62,522	3 74	9.2
	Urban	3,311	8,602	2,662,290	295,345	37,865	24,546	4 51	21.1
	Total	12,964	778,972	19,085,554	1,198,807	134,504	87,068	3 93	10.9
1882	Rural	9,619	795,632	16,366,884	1,062,539	96,269	62,039	3 77	9.1
	Urban	3,347	9,624	2,642,815	233,237	37,090	19,265	4 05	19.6
	Total	12,966	805,256	19,009,699	1,295,776	133,359	81,304	3 84	10.6
1883	Rural	9,830	834,245	17,421,095	1,271,755	101,299	62,187	3 92	8.7
	Urban	3,572	9,651	2,729,025	379,215	41,868	22,064	4 66	20.6
	Total	13,402	843,896	20,150,120	1,650,970	143,167	84,251	4 11	10.4
1884	Rural	9,817	822,088	17,522,767	1,252,785	105,996	64,873	4 11	9.1
	Urban	3,535	9,286	2,865,763	367,322	37,217	21,739	3 98	18.2
	Total	13,352	831,374	20,388,530	1,620,107	143,213	86,612	4 08	10.4
1885	Rural	10,235	825,900	17,326,893	1,124,600	108,192	65,219	4 12	9.4
	Urban	4,154	9,311	2,854,708	458,675	43,241	24,573	4 36	20.5
	Total	14,389	835,211	20,181,601	1,583,275	151,433	89,792	4 19	11.1
Grey:									
1881	Rural	13,203	1,036,430	9,879,318	808,483	109,236	71,781	3 27	16.9
	Urban	2,008	8,225	1,595,565	249,362	26,314	15,085	5 80	22.4
	Total	15,211	1,044,655	11,474,883	1,057,845	135,550	86,866	3 56	17.7
1882	Rural	13,223	1,059,645	12,596,700	954,136	101,043	73,780	3 19	12.9
	Urban	2,031	8,225	1,670,994	253,515	26,833	14,070	5 46	21.2
	Total	15,254	1,067,870	14,267,694	1,207,651	127,876	87,850	3 46	13.9
1883	Rural	13,404	1,062,671	12,539,078	1,017,709	108,723	75,948	3 42	13.6
	Urban	2,084	8,625	1,710,889	260,015	34,110	12,443	6 38	23.6
	Total	15,488	1,071,296	14,249,967	1,277,724	142,833	88,391	3 77	14.9
1884	Rural	13,151	1,065,429	14,749,796	1,070,620	115,477	78,126	3 54	12.2
	Urban	2,169	8,420	1,844,902	239,870	28,422	14,098	5 43	20.4
	Total	15,320	1,073,849	16,594,698	1,310,490	143,899	92,224	3 77	13.2
1885	Rural	13,629	1,065,197	15,532,012	1,108,056	113,700	79,853	3 51	11.6
	Urban	2,315	8,420	2,087,869	230,420	33,685	14,985	5 79	21.0
	Total	15,944	1,073,617	17,619,881	1,338,476	147,385	94,838	3 81	12.8
Simcoe:									
1881	Rural	13,466	1,144,027	12,193,282	591,507	99,740	75,659	3 49	13.7
	Urban	3,947	10,675	3,454,842	339,180	42,318	38,320	4 60	21.2
	Total	17,413	1,154,702	15,648,124	930,687	142,058	113,979	3 78	15.4
1882	Rural	12,571	1,123,381	12,540,578	631,024	99,898	71,716	3 47	13.0
	Urban	5,135	12,052	3,779,243	363,200	53,450	31,564	4 51	20.5
	Total	17,706	1,135,433	16,319,821	994,224	153,348	103,280	3 75	14.8
1883	Rural	13,668	1,142,228	12,687,824	748,348	109,177	76,040	3 62	13.8
	Urban	4,748	12,344	3,911,648	392,080	49,001	35,155	4 25	19.5
	Total	18,416	1,154,572	16,599,472	1,140,428	158,178	111,195	3 80	15.2
1884	Rural	14,325	1,160,611	13,128,868	686,259	118,017	83,572	3 82	14.6
	Urban	5,111	12,406	4,009,080	389,105	49,728	31,405	3 94	18.4
	Total	19,436	1,172,417	17,137,948	1,075,364	167,745	114,977	3 85	15.5

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
				$	$	$	$	$ c.	Mills.
Simcoe.—*Continued.*									
1885	Rural	14,223	1,167,643	12,976,940	678,285	123,473	79,409	3 91	14.9
	Urban	6,601	14,056	4,354,140	384,270	63,513	40,689	4 44	22.0
	Total	20,824	1,181,699	17,331,080	1,062,555	186,986	120,098	4 07	16.7
Middlesex:									
1881	Rural	14,221	755,502	21,819,461	753,505	128,561	81,406	3 94	9.3
	Urban	4,132	6,172	2,312,552	116,083	24,531	30,725	3 95	22.7
	Total	18,353	761,674	24,132,013	869,588	153,092	112,131	3 94	10.6
1882	Rural	14,843	753,085	22,242,290	753,729	137,128	84,509	4 18	9.3
	Urban	4,212	6,374	2,517,500	99,230	26,720	23,703	3 52	19.6
	Total	19,055	759,459	24,759,790	852,959	163,848	108,212	4 04	10.
1883	Rural	14,826	758,220	22,329,203	725,725	135,960	83,287	4 26	9.5
	Urban	4,531	6,255	2,601,162	104,300	31,948	23,772	3 60	20.6
	Total	19,357	764,475	24,930,365	830,025	167,908	107,059	4 11	10.7
1884	Rural	14,300	757,698	22,436,691	711,637	144,677	86,209	4 48	10.0
	Urban	4,464	6,317	2,663,031	101,071	39,549	26,079	4 34	23.7
	Total	18,764	764,015	25,099,722	812,708	184,226	112,288	4 45	11.4
1885	Rural	14,673	757,793	22,507,376	696,622	145,221	82,969	4 45	9.8
	*Urban	3,155	5,670	1,932,331	89,000	23,579	18,199	4 09	20.7
	Total	17,828	763,463	24,439,707	785,622	168,800	101,168	4 39	10.7
Oxford:									
1881	Rural	8,184	471,102	18,959,690	1,324,425	59,422	53,535	3 69	5.6
	Urban	4,463	6,822	3,361,015	278,675	42,912	21,028	4 57	17.6
	Total	12,647	477,924	22,320,705	1,603,100	102,334	74,563	3 97	7.4
1882	Rural	8,221	466,252	19,034,537	1,349,020	63,927	53,832	3 83	5.8
	Urban	4,514	6,632	3,467,035	272,275	45,059	21,778	5 07	17.9
	Total	12,735	472,884	22,501,572	1,621,295	108,986	75,610	4 21	7.6
1883	Rural	8,283	470,543	19,226,858	1,414,700	85,819	56,294	4 65	6.9
	Urban	5,234	6,829	3,571,075	317,500	53,110	22,698	5 38	19.5
	Total	13,517	477,372	22,797,933	1,732,200	138,929	78,992	4 88	8.9
1884	Rural	8,191	471,520	19,126,285	1,388,546	81,102	52,015	4 43	6.5
	Urban	4,125	6,784	3,590,770	315,950	48,304	20,288	4 77	17.6
	Total	12,316	478,304	22,717,055	1,704,496	129,406	72,303	4 54	8.3
1885	Rural	8,325	471,664	19,116,046	1,374,258	76,311	53,056	4 34	6.3
	Urban	3,985	6,950	3,635,365	295,925	45,651	21,784	4 67	17.2
	Total	12,310	478,614	22,751,411	1,670,183	121,962	74,840	4 45	8.1
Brant:									
1881	Rural	4,207	217,531	8,557,133	764,273	25,115	21,331	2 88	5.0
	Urban	875	685	863,143	151,062	6,491	6,418	4 22	12.7
	Total	5,082	218,216	9,420,276	915,335	31,606	27,749	3 09	5.7
1882	Rural	4,113	213,952	8,894,436	811,926	28,262	26,030	3 37	5.6
	Urban	892	685	881,515	156,195	9,858	6,922	5 47	16.2
	Total	5,005	214,637	9,775,951	968,121	38,120	32,952	3 71	6.6

* London East annexed to city of London.

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
Brant.—*Continued.*				$	$	$	$	$ c.	Mills.
1883	Rural	4,303	215,990	9,013,575	975,044	28,552	25,963	3 37	5.5
	Urban	956	685	908,006	147,095	11,606	5,943	4 97	16.6
	Total	5,259	216,675	9,921,581	1,122,139	40,158	31,906	3 65	6.5
1884	Rural	4,296	215,905	9,065,482	989,361	30,638	24,440	3 36	5.5
	Urban	986	685	918,099	140,302	12,701	5,990	5 59	17.7
	Total	5,282	216,590	9,983,581	1,129,663	43,339	30,430	3 74	6.6
1885	Rural	4,488	215,826	9,184,292	980,976	31,051	24,615	3 32	5.5
	Urban	903	685	947,794	144,818	13,111	6,104	5 79	17.6
	Total	5,391	216,511	10,132,086	1,125,794	44,162	30,719	3 73	6.7
Perth:									
1881	Rural	7,548	517,085	17,724,088	708,256	84,486	49,144	4 22	7.2
	Urban	4,368	8,646	4,561,040	370,300	61,367	31,634	5 20	18.9
	Total	11,916	525,731	22,285,128	1,078,556	145,853	80,778	4 57	9.7
1882	Rural	7,472	516,844	17,657,944	685,665	87,658	49,591	4 49	7.5
	Urban	4,205	9,727	4,728,345	370,750	62,268	28,873	5 18	17.9
	Total	11,677	526,571	22,386,289	1,056,415	149,926	78,464	4 74	9.7
1883	Rural	7,419	518,668	17,873,671	812,129	87,198	48,132	4 46	7.2
	Urban	4,521	10,114	4,580,106	351,910	62,541	26,988	5 12	18.1
	Total	11,940	528,782	22,453,777	1,164,039	149,739	75,120	4 70	9.5
1884	Rural	7,647	517,412	17,916,639	780,921	91,432	51,519	4 75	7.6
	Urban	4,414	8,943	4,538,776	332,750	60,589	29,852	5 16	18.6
	Total	12,061	526,355	22,455,415	1,113,671	152,021	81,371	4 90	9.9
1885	Rural	7,770	518,921	17,860,782	873,161	93,019	51,999	4 71	7.7
	*Urban	2,470	5,617	2,325,281	261,100	29,676	16,427	4 97	17.8
	Total	10,240	524,538	20,186,063	1,134,261	122,695	68,426	4 77	9.0
Wellington:									
1881	Rural	9,511	663,474	13,468,020	1,054,636	97,623	53,742	3 86	10.4
	Urban	3,435	7,316	2,104,700	239,325	31,201	21,790	4 45	22.6
	Total	12,946	670,790	15,572,720	1,293,961	128,824	75,532	4 00	12.1
1882	Rural	9,486	662,650	13,503,752	1,054,080	94,241	55,009	3 95	10.2
	Urban	3,479	7,431	2,184,458	210,967	33,911	21,708	4 56	23.2
	Total	12,965	670,081	15,688,210	1,265,047	128,152	76,717	4 10	12.1
†1883	Rural	9,001	626,314	13,452,701	1,099,841	99,047	54,623	4 29	10.6
	Urban	3,179	7,456	2,187,972	242,234	34,997	21,560	4 74	23.3
	Total	12,180	633,770	15,640,673	1,342,075	134,044	76,183	4 40	12.4
1884	Rural	9,136	625,863	13,489,192	1,123,196	94,223	60,150	4 30	10.6
	Urban	3,208	7,391	2,199,373	249,385	33,797	21,123	4 61	22.4
	Total	12,344	633,254	15,688,565	1,372,581	128,020	81,273	4 37	12.3
1885	Rural	9,138	626,962	13,945,504	1,214,701	105,153	60,214	4 66	10.9
	Urban	3,271	7,365	2,214,283	259,310	32,325	21,147	4 48	21.6
	Total	12,409	634,327	16,159,787	1,474,011	137,478	81,361	4 61	12.4
Waterloo:									
1881	Rural	5,453	307,036	8,533,491	809,492	50,881	41,905	3 65	9.9
	Urban	3,625	8,742	2,768,958	508,667	44,732	25,892	4 98	21.5
	Total	9,078	315,778	11,302,449	1,318,159	95,613	67,797	4 13	12.9

* Stratford becomes a city.

† Township of East Luther annexed to Dufferin.

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of—		Taxes imposed for—		Rate of taxation for Municipal and School purposes—	
				Real property.	Personal property.	Municipal purposes.	School purposes.	Per head of population.	On the dollar.
				$	$	$	$	$ c.	Mills.
WATERLOO.—*Continued.*									
1882	Rural	5,526	303,305	8,571,744	878,643	49,537	42,823	3 63	9.8
	Urban	3,653	8,792	2,864,953	519,952	47,200	27,110	5 06	21.9
	Total	9,179	312,097	11,436,697	1,398,595	96,737	69,933	4 16	13.0
1883	Rural	5,592	305,930	8,485,609	840.435	51,132	44,245	3 72	10.2
	Urban	3,928	8,936	3,013,054	538,050	47,359	28,497	4 85	21.4
	Total	9,520	314,866	11,498,663	1,378,485	98,491	72,742	4 15	13.3
1884	Rural	5,342	306,607	8,479,003	827,642	56,797	42,808	4 00	10.7
	Urban	4,481	9,281	3,372,316	576,278	48,753	39,437	5 09	22.3
	Total	9,823	315,888	11,851,319	1,403,920	105,550	82,245	4 45	14.2
1885	Rural	5,203	306,133	8,518,916	825,296	52,107	43,768	3 86	10.3
	Urban	4,753	9,448	3,553,237	588,125	55,327	31,498	4 75	21.0
	Total	9,956	315,581	12,072,153	1,413,421	107,434	75,266	4 24	13.5
DUFFERIN:									
1881	Rural	3,254	312,335	3,812,913	188,860	28,596	18,563	3 25	11.8
	Urban	1,067	2,300	596,060	48,590	8,222	4,601	4 03	19.9
	Total	4,321	314,635	4,408,973	237,450	36,818	23,164	3 38	12.9
1882	Rural	3,492	313,012	3,705,465	170,700	29,343	18,063	3 23	12.2
	Urban	1,084	2,300	467,090	54,040	6,562	5,895	3 99	23.9
	Total	4,576	315,312	4,172,555	224,740	35,905	23,958	3 37	13.6
*1883	Rural	3,895	356,212	4,241,558	214,500	31,590	22,401	3 49	12.1
	Urban	1,096	2,300	590,905	54,550	7,985	7,749	4 95	24.4
	Total	4,991	358,512	4,832,463	269,050	39,575	30,150	3 74	13.7
1884	Rural	3,844	355,319	4,192,661	226,150	33,224	24,144	3 58	13.0
	Urban	1,115	2,224	718,252	53,215	10,772	8,016	5 67	24.4
	Total	4,959	357,543	4,910,913	279,365	43,996	32,160	3 94	14.7
1885	Rural	4,084	357,661	4,375,035	274,778	35,819	25,946	3 80	13.3
	Urban	1,171	2,380	753,602	73,850	15,571	12,960	8 22	34.5
	Total	5,255	360,041	5,128,637	348,628	51,390	38,906	4 58	16.5
LINCOLN:									
1881	Rural	4,142	191,434	4,392,353	265,843	27,586	22,966	3 48	10.9
	Urban	1,643	2,500	1,003,874	94,945	8,970	11,030	3 65	18.2
	Total	5,785	193,934	5,396,227	360,788	36,556	33,996	3 53	12.2
1882	Rural	4,249	188,732	4,453,801	302,431	29,397	23,749	3 68	11.2
	Urban	1,474	2,548	1,028,697	82,910	11,529	11,210	4 18	20.5
	Total	5,723	191,280	5,482,498	385,341	40,926	34'959	3 82	12.9
1883	Rural	4,249	189,312	4,453,801	302,431	29,397	24,474	3 79	11.3
	Urban	1,474	2,753	1,028,697	82,910	11,529	9,887	3 76	19.3
	Total	5,723	192,065	5,482,498	385,341	40,926	34,361	3 78	12.8
1884	Rural	4,277	190,266	4,447,476	282,671	29,355	25,348	3 84	11.6
	Urban	1,581	2,509	1,058,568	85,785	11,608	9,081	3 71	18.1
	Total	5,858	192,775	5,506,044	368,456	40,963	34,429	3 80	12.8
1885	Rural	4,371	190,904	4,514,881	292,255	28,676	24,704	3 66	11.1
	Urban	1,516	2,497	1,058,310	78,240	11,808	11.128	4 22	20.2
	Total	5,887	193,401	5,573,191	370,495	40,484	35,832	3 81	12.8

* East Luther added.

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of—		Taxes imposed for—		Rate of taxation for Municipal and School purposes—	
				Real property.	Personal property.	Municipal purposes.	School purposes.	Per head of population.	On the dollar.
				$	$	$	$	$ c.	Mills.
Wentworth:									
1881	Rural	6,436	272,069	9,574,480	636,810	35,223	31,764	2 71	6.6
	Urban	1,339	880	1,034,970	125,712	10,891	7,803	4 23	16.1
	Total	7,775	272,949	10,609,450	762,522	46,114	39,567	2 94	7.5
1882	Rural	6,530	271,534	9,607,483	662,876	36,943	29,693	2 76	6.5
	Urban	1,296	950	1,058,655	122,941	11,804	7,549	4 06	16.4
	Total	7,826	272,484	10,666,138	785,817	48,747	37,242	2 98	7.5
1883	Rural	6,722	273,458	11,090,988	699,854	35,947	30,319	2 80	5.6
	Urban	1,373	890	1,070,475	127,250	19,106	8,395	5 64	23.0
	Total	8,095	274,348	12,161,463	827,104	55,053	38,714	3 28	7.2
1884	Rural	7,250	275,032	11,013,600	714,605	35,015	31,551	2 75	5.7
	Urban	1,355	950	1,052,240	126,265	12,241	8,578	4 48	17.7
	Total	8,605	275,982	12,065,840	840,870	47,256	40,129	3 03	6.8
1885	Rural	7,158	274,307	10,925,888	712,383	33,249	32,270	2 69	5.6
	Urban	1,336	900	1,049,015	116,890	11,784	7,398	4 33	16.5
	Total	8,494	275,207	11,974,903	829,273	45,033	39,668	2 94	6.6
Halton.									
1881	Rural	3,710	222,873	7,473,855	517,817	27,696	21,531	3 34	6.2
	Urban	1,707	3,694	1,226,906	103,063	12,012	9,103	3 34	15.9
	Total	5,417	226,567	8,700,761	620,880	39,708	30,634	3 34	7.5
1882	Rural	3,703	223,948	7,454,455	549,214	35,939	12,006	4 03	7.2
	Urban	1,706	3,704	1,234,396	106,212	12,532	10,617	3 75	17.3
	Total	5,409	227,652	8,688,851	655,426	48,471	32,623	3 95	8.7
1883	Rural	3,911	223,209	7,418,432	602,005	37,563	21,523	4 17	7.4
	Urban	1,734	3,708	1,297,322	109,861	13,974	9,597	3 79	16.7
	Total	5,645	226,917	8,715,754	711,866	51,537	31,120	4 06	8.8
1884	Rural	3,717	224,243	7,399,445	605,176	30,133	22,226	3 71	6.5
	Urban	1,751	3,679	1,290,904	118,410	13,486	10,315	3 69	16.9
	Total	5,468	227,922	8,690,349	723,586	43,619	32,541	3 70	8.1
1895	Rural	3,785	224,723	7,360,355	613,970	28,885	22,538	3 63	6.4
	Urban	1,933	3,723	1,308,685	112,961	13,265	9,439	3 45	16.0
	Total	5,718	228,446	8,669,040	726,931	42,150	31,977	3 58	7.9
Peel:									
1881	Rural	5,041	287,544	8,892,960	562,315	44,827	27,361	3 93	7.6
	Urban	1,545	2,216	926,011	121,050	14,942	8,350	5 57	22.2
	Total	6,586	289,760	9,818,971	683,365	59,769	35,711	4 24	9.1
1882	Rural	5,093	288,329	9,011,095	547,120	45,768	27,069	4 06	7.6
	Urban	1,585	2,589	952,255	230,375	17,980	8,997	6 10	22.8
	Total	6,678	290,918	9,963,350	777,495	63,748	36,066	4 47	9.3
1883	Rural	5,133	288,349	9,007,450	552,469	39,701	26,432	3 71	6.9
	Urban	1,613	2,515	880,228	255,125	17,337	10,189	6 28	24.2
	Total	6,746	290,864	9,887,678	807,594	57,038	36,621	4 22	8.7
1884	Rural	5,150	288,009	9,019,180	523,721	39,803	30,766	3 89	7.4
	Urban	1,730	2,413	889,418	290,985	19,241	8,241	5 92	23.3
	Total	6,880	290,422	9,908,598	814,706	58,044	39,007	4 30	9.1

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of—		Taxes imposed for—		Rate of taxation for Municipal and School purposes—	
				Real property.	Personal property.	Municipal purposes.	School purposes.	Per head of population.	On the dollar.
				$	$	$	$	$ c.	Mills.
PEEL.—*Continued.*									
1885	Rural	5,113	287,995	9,042,965	562,030	38,659	27,468	3 69	6.9
	Urban	1,653	2,494	1,054,566	142,950	14,859	12,550	5 84	22.9
	Total	6,766	290,489	10,097,531	704,980	53,518	40,018	4 13	8.7
YORK:									
1881	Rural	13,531	540,719	23,125,704	1,227,125	77,550	65,296	3 08	5.9
	Urban	3,838	6,385	4,553,942	260,834	40,345	18,497	4 45	12.2
	Total	17,369	547,104	27,679,646	1,487,959	117,895	83,793	3 38	6.9
1882	Rural	13,507	537,411	23,536,564	1,205,640	71,253	68,303	3 11	5.6
	Urban	4,723	6,837	5,544,161	279,855	47,296	24,807	4 59	12.4
	Total	18,230	544,248	29,080,725	1,485,495	118,549	93,110	3 49	6.9
1883	Rural	13,223	538,758	23,856,668	1,237,790	76,269	64,638	3 14	5.6
	Urban	3,671	6,705	3,478,869	133,535	22,998	22,617	4 06	12.6
	Total	16,894	545,463	27,335,537	1,371,325	99,267	87,255	3 32	6.5
1884	Rural	13,436	539,415	23,311,692	1,145,635	71,779	61,887	3 20	5.5
	Urban	4,424	6,315	3,255,975	179,500	29,401	29,436	5 28	17.1
	Total	17,860	545,730	26,567,667	1,325,135	101,180	91,323	3 64	6.9
1885	Rural	14,152	541,516	23,518,287	1,241,190	77,543	62,752	3 23	5.7
	Urban	4,783	6,464	3,515,457	194,345	33,005	21,613	4 53	14.7
	Total	18,935	547,980	27,033,744	1,435,535	110,548	84,365	3 51	6.8
ONTARIO:									
1881	Rural	9,309	500,911	15,301,307	863,348	55,684	48,720	3 09	6.5
	Urban	2,853	7,664	2,861,423	200,858	38,300	22,014	5 29	19.7
	Total	12,162	508,575	18,162,730	1,064,206	93,984	70,734	3 65	8.6
1882	Rural	9,345	494,444	15,271,105	951,285	58,221	50,815	3 25	6.7
	Urban	2,988	7,638	2,881,630	220,481	39,415	22,542	5 33	20.0
	Total	12,333	502,082	18,152,735	1,171,716	97,636	73,357	3 78	8.8
1883	Rural	9,389	497,056	15,345,866	966,710	58,171	50,269	3 29	6.6
	Urban	2,971	7,746	2,861,568	205,400	39,736	24,623	5 52	21.0
	Total	12,360	504,802	18,207,434	1,172,110	97,907	74,892	3 87	8.9
1884	Rural	9,540	498,237	15,532,466	986,171	61,382	51,457	3 37	6.8
	Urban	3,018	7,575	2,815,598	195,530	42,596	26,961	5 83	23.1
	Total	12,558	505,812	18,348,064	1,181,701	103,978	78,418	4 02	9.3
1885	Rural	9,473	496,283	15,772,969	1,014,135	59,563	51,568	3 41	6.6
	Urban	3,358	7,984	2,963,769	232,368	33,329	29,225	4 86	19.6
	Total	12,831	504,267	18,736,738	1,246,503	92,892	80,793	3 82	8.7
DURHAM AND NORTHUMBERLAND:									
1881	Rural	13,266	807,377	21,768,527	1,200,235	83,881	74,617	3 11	6.9
	Urban	5,405	13,581	4,778,660	689,804	69,039	31,932	4 87	18.5
	Total	18,671	820,958	26,547,187	1,890,039	152,920	106,549	3 62	9.1
1882	Rural	13,327	796,788	21,587,392	1,271,670	74,214	75,080	2 97	6.5
	Urban	5,562	13,775	5,155,223	713,758	73,463	31,083	4 96	17.8
	Total	18,889	810,563	26,742,615	1,985,428	147,677	106,163	3 56	8.8
1883	Rural	13,091	800,485	21,675,095	1,235,255	71,385	77,844	3 12	6.5
	Urban	5,561	13,956	4,945,349	716,922	68,211	37,235	4 96	18.6
	Total	18,652	814,441	26,620,444	1,952,177	139,596	115,079	3 69	8.9

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
Durham and Northumberland.—*Continued.*				$	$	$	$	$ c.	Mills.
1884	Rural	12,789	803,398	21,429,093	1,252,256	72,242	81,719	3 19	6.8
	Urban	5,859	13,494	5,031,344	736,179	72,023	36,337	5 19	19.0
	Total	18,648	816,892	26,460,437	1,988,435	144,265	118,056	3 80	9.3
1885	Rural	13,177	800,476	21,304,334	1,267,816	73,530	80,904	3 23	6.8
	Urban	5,881	13,304	5,051,209	806,535	76,265	38,027	5 38	19.5
	Total	19,058	813,780	26,355,543	2,074,351	149,795	118,931	3 89	9.5
Prince Edward:									
1881	Rural	4,772	230,207	5,639,519	336,820	20,161	25,249	3 00	7.6
	Urban	892	2,014	1,058,755	59,350	7,395	7,759	4 05	13.5
	Total	5,664	232,221	6,698,274	396,170	27,556	33,008	3 27	8.5
1882	Rural	4,815	229,504	5,789,445	345,273	20,177	24,372	3 02	7.3
	Urban	1,010	2,014	1,073,870	60,150	7,826	8,616	4 81	14.5
	Total	5,825	231,518	6,863,315	405,423	28,003	32,988	3 36	8.4
1883	Rural	4,757	230,746	5,768,061	353,592	21,931	25,206	3 10	7.7
	Urban	891	2,012	1,089,525	79,250	8,308	7,395	4 85	13.4
	Total	5,648	232,758	6,857,586	432,842	30,239	32,601	3 41	8.6
1884	Rural	4,846	230,261	5,785,645	358,190	22,645	25,232	3 19	7.8
	Urban	905	2,008	1,088,930	64,650	9,148	6,523	4 50	13.6
	Total	5,751	232,269	6,874,575	422,840	31,793	31,755	3 44	8.7
1885	Rural	4,888	232,000	5,822,782	359,848	28,001	26,634	3 75	8.8
	Urban	1,186	1,983	1,092,835	42,600	12,731	7,688	6 17	18.0
	Total	6,074	233,983	6,915,617	402,448	40,732	34,322	4 20	10.3
Lennox and Addington:									
1881	Rural	5,787	394,114	6,403,149	307,445	39,913	23,980	3 51	9.5
	Urban	1,426	6,870	1,018,848	64,550	14,013	7,751	4 67	20.1
	Total	7,213	400,984	7,421,997	371,995	53,926	31,731	3 75	11.0
1882	Rural	5,592	395,239	6,413,826	276,654	43,699	25,223	3 77	10.3
	Urban	1,385	6,380	1,079,054	94,450	17,626	12,091	6 25	25.3
	Total	6,977	401,619	7,492,880	371,104	61,325	37,314	4 28	12.5
1883	Rural	5,692	392,858	6,433,124	303,096	44,207	26,827	3 91	10.5
	Urban	1,431	6,503	1,072,834	100,150	23,658	8,971	6 57	27.8
	Total	7,123	399,361	7,505,958	403,246	67,865	35,798	4 52	13.1
1884	Rural	5,774	399,050	6,419,255	325,873	45,061	27,680	3 91	10.8
	Urban	1,307	6,741	1,075,647	89,700	17,365	10,070	6 38	23.5
	Total	7,081	405,791	7,494,902	415,573	62,426	37,750	4 38	12.7
1885	Rural	6,050	404,040	6,552,850	345,589	48,991	29,224	4 14	11.3
	Urban	1,425	6,546	1,178,770	88,050	18,211	9,473	5 83	21.8
	Total	7,475	410,586	7,731,620	434,239	67,202	38,697	4 48	13.0
Frontenac:									
1881	Rural	5,871	609,438	4,637,178	358,604	42,295	29,646	3 41	14.4
	Urban	352	564	135,321	36,200	1,536	2,038	2 38	20.8
	Total	6,223	610,002	4,772,499	394,804	43,831	31,684	3 34	14.6
1882	Rural	5,897	604,582	4,500,907	356,721	38,625	31,716	3 38	14.5
	Urban	349	564	128,780	36,000	2,680	2,099	3 06	29.0
	Total	6,246	605,146	4,629,687	392,721	41,305	33,815	3 36	15.0

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of—		Taxes imposed for—		Rate of taxation for Municipal and School purposes—	
				Real property.	Personal property.	Municipal purposes.	School purposes.	Per head of population.	On the dollar.
				$	$	$	$	$ c.	Mills.
Frontenac.—*Continued.*									
1883	Rural	5,723	640,099	4,528,712	389,580	38,074	30,709	3 29	14.0
	Urban	334	575	128,560	47,100	2,851	2,085	3 15	28.1
	Total	6,057	640,674	4,657,272	436,680	40,925	32,794	3 28	14.5
1884	Rural	6,033	650,555	4,490,341	384,718	38,425	32,604	3 42	14.6
	Urban	333	565	128,800	44,200	2,766	2,031	3 47	27.7
	Total	6,366	651,120	4,619,141	428,918	41,191	34,635	3 42	15.0
1885	Rural	5,966	668,023	4,422,752	354,957	42,729	31,873	3 53	15.6
	Urban	340	565	158,935	42,200	3,735	2,343	4 57	30.2
	Total	6,306	668,588	4,581,687	397,157	46,464	34,216	3 59	16.2
Leeds and Grenville:									
1881	Rural	11,216	749,955	9,846,276	712,041	39,097	51,766	2 39	8.6
	Urban	3,960	5,327	3,759,165	259,900	43,200	22,731	4 17	16.4
	Total	15,176	755,282	13,605,441	971,941	82,297	74,497	2.92	10.8
1882	Rural	10,918	748,790	9,527,398	749,610	43,786	52,919	2 54	9.4
	Urban	4,046	5,482	3,781,861	273,700	42,261	22,879	4 06	16.1
	Total	14,964	754,272	13,309,259	1,023,310	86,047	75,798	2 99	11.3
1883	Rural	11,182	741,350	9,843,689	769,587	47,426	53,996	2 69	9.6
	Urban	4,002	5,246	3,758,580	254,050	44,914	22,394	4 10	16.8
	Total	15,184	746,596	13,602,269	1,023,637	92,340	76,390	3 12	11.5
1884	Rural	11,378	750,416	9,898,301	808,435	47,015	56,496	2 76	9.7
	Urban	4,001	5,060	4,556,901	470,957	58,556	24,505	4 78	16.5
	Total	15,379	755,476	14,455,202	1,279,392	105,571	81,001	3 40	11.9
1885	Rural	11,592	747,824	9,914,324	802,190	53,284	57,073	2 88	10.3
	Urban	4,063	5,595	4,590,320	454,132	54,490	23,835	4 49	15.5
	Total	15,655	753,419	14,504,644	1,256,322	107,774	80,908	3 39	12.0
Dundas, Stormont and Glengarry:									
1881	Rural	11,626	766,467	12,331,821	899,019	49,641	56,047	2 17	8.0
	Urban	1,626	2,623	1,511,791	188,490	12,589	10,014	3 34	13.3
	Total	13,252	769,090	13,843,612	1,087,509	62,230	66,061	2 31	8.6
1882	Rural	11,692	769,765	12,252,946	976,375	51,963	57,439	2 26	8.3
	Urban	1,753	2,653	1,666,770	181,250	10,951	10,774	3 11	11.7
	Total	13,445	772,418	13,919,716	1,157,625	62,914	68,213	2 37	8.7
1883	Rural	11,911	778,223	12,261,703	910,581	51,572	61,539	2 27	8.8
	Urban	1,880	2,570	1,646,325	177,350	12,808	12,108	3 29	13.7
	Total	13,791	780,793	13,908,028	1,087,931	64,380	73,647	2 41	9.2
1884	Rural	12,064	778,605	12,150,777	966,294	54,856	62,601	2 45	9.0
	Urban	2,147	3,016	1,955,032	183,400	18,114	14,576	3 41	15.3
	Total	14,211	781,621	14,105,809	1,149,694	72,970	77,177	2 61	9.8
1885	Rural	12,058	774,668	12,132,162	936,658	58,314	67,771	2 60	9.6
	Urban	2,347	2,881	2,038,505	157,675	18,466	16,192	3 78	15.8
	Total	14,405	777,549	14,170,667	1,094,333	76,780	83,963	2 78	10.5
Prescott and Russell:									
1881	Rural	6,024	536,746	4,138,952	259,440	23,693	28,259	1 91	11.8
	Urban	444	9,418	288,945	76,925	3,767	3,162	3 12	18.9
	Total	6,468	546,164	4,427,897	336,365	27,460	31,421	2 00	12.4

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
Prescott and Russell.—*Continued.*				$	$	$	$	$ c.	Mills.
1882	Rural	6,147	529,263	3,821,787	290,780	22,971	28,310	1 85	12.5
	Urban	444	9,419	288,945	76,925	3,767	3,319	3 30	19.4
	Total	6,591	538,682	4,110,732	367,705	26,738	31,629	1 95	13.0
1883	Rural	6,540	536,985	4,148,610	288,590	27,199	33,046	2 01	13.8
	Urban	640	9,419	291,995	75,650	2,574	3,509	2 69	16.5
	Total	7,180	546,404	4,440,605	364,240	29,773	36,555	2 06	13.8
1884	Rural	6,768	535,895	4,232,189	285,253	27,013	36,326	2 08	14.0
	Urban	461	9,355	292,295	74,800	3,113	3,804	3 05	18.8
	Total	7,229	545,250	4,524,484	360,053	30,126	40,130	2 15	14.4
1885	Rural	7,010	537,513	4,092,219	292,424	32,506	37,779	2 20	16.0
	Urban	470	9,418	333,085	72,150	3,484	4,000	3 14	18.5
	Total	7,480	546,931	4,425,304	364,574	35,990	41,779	2 27	16.2
Carleton:									
1881	Rural	7,674	559,289	6,769,801	482,085	36,855	40,316	2 49	10.6
	Urban	356	1,505	353,600	42,550	4,629	2,108	5 40	17.0
	Total	8,030	560,794	7,123,401	524,635	41,484	42,424	2 61	11.0
1882	Rural	7,548	552,287	6,723,461	478,078	35,884	39,929	2 53	10.5
	Urban	361	1,565	355,345	41,902	5,199	2,055	5 79	18.3
	Total	7,909	553,792	7,078,806	518,980	41,083	41,984	2 66	10.9
1883	Rural	7,444	558,460	7,224,547	477,082	38,658	39,541	2 75	10.1
	Urban	372	1,544	350,105	42,476	4,738	2,003	4 51	17.2
	Total	7,816	560,004	7,574,652	519,558	43,396	41,544	2 84	10.5
1884	Rural	7,692	557,841	7,326,207	488,178	40,058	45,084	2 84	10.9
	Urban	389	1,587	355,471	41,188	4,106	3,037	4 77	18.0
	Total	8,081	559,428	7,681,678	529,366	44,164	48,121	2 93	11.2
1885	Rural	7,703	565,416	7,690,572	529,510	37,767	42,273	2 61	9.7
	Urban	383	1,627	358,337	40,385	4,782	2,712	4 77	18.8
	Total	8,086	567,043	8,048,909	569,895	42,549	44,985	2 72	10.2
Renfrew:									
1881	Rural	5,875	767,786	2,177,351	387,338	19,594	27,755	1 74	18.5
	Urban	1,535	3,843	1,274,582	214,995	12,828	11,879	3 96	16.6
	Total	7,410	771,629	3,451,933	602,333	32,422	39,634	2 16	17.8
1882	Rural	5,845	779,860	2,187,497	419,939	17,395	28,902	1 72	17.8
	Urban	1,613	3,790	1,314,912	236,325	13,553	12,036	3 99	16.5
	Total	7,458	783,650	3,502,409	656,264	30,948	40,938	2 15	17.7
1883	Rural	6,020	807,954	2,184,837	387,262	22,563	28,271	1 87	19.8
	Urban	1,758	3,562	1,367,078	244,950	12,043	14,743	3 61	16.6
	Total	7,778	811,516	3,551,915	632,212	34,606	43,014	2 24	18.5
1884	Rural	6,056	809,553	2,221,707	432,171	22,250	34,030	2 02	21.2
	Urban	1,792	3,642	1,415,298	250,755	14,637	13,803	3 44	17.1
	Total	7,848	813,195	3,637,005	682,926	36,887	47,833	2 35	19.6
1885	Rural	6,233	856,962	2,245,737	480,904	25,566	32,567	2 04	21.3
	Urban	1,802	3,741	1,467,563	247,897	15,652	18,117	4 24	19.7
	Total	8,035	860,703	3,713,300	728,801	41,218	50,684	2 52	20.7

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
Lanark:				$	$	$	$	$ c.	Mills.
1881	Rural	5,261	643,668	4,479,362	557,803	20,941	28,874	2 39	9.9
	Urban	2,626	5,635	2,177,751	327,397	22,776	16,248	3 97	15.6
	Total	7,887	649,303	6,657,113	885,200	43,717	45,122	2 90	11.8
1882	Rural	5,314	629,743	4,473,274	607,135	21,897	27,662	2 43	9.7
	Urban	2,964	5,420	2,216,879	363,442	24,028	16,123	4 03	15.6
	Total	8,278	635,163	6,690,153	970,577	45,925	43,785	2 95	11.7
1883	Rural	5,319	635,861	4,613,904	660,233	22,243	29,120	2 45	9.7
	Urban	2,957	5,778	2,370,964	398,950	26,988	25,569	4 67	19.0
	Total	8,276	641,639	6,984,868	1,059,183	49,231	54,689	3 23	12.9
*1884	Rural	5,319	665,789	4,613,904	660,233	22,243	31,855	2 66	10.3
	Urban	2,957	5,783	2,370,964	398,950	26,988	26,886	4 45	19.4
	Total	8,276	671,572	6,984,868	1,059,183	49,231	58,741	3 32	13.4
*1885	Rural	5,319	663,295	4,613,904	660,233	22,243	31,832	2 62	10.3
	Urban	2,957	5,794	2,370,964	398,950	26,988	25,399	4 19	18.9
	Total	8,276	669,089	6,984,868	1,059,183	49,231	57,231	3 21	13.2
Victoria:†									
1881	Rural	6,902	744,480	8,143,995	423,688	62,326	35,712	3 67	11.4
	Urban	2,004	3,460	1,845,514	235,115	27,856	15,961	4 92	21.1
	Total	8,906	747,940	9,989,509	658,803	90,182	51,673	3 98	13.3
1882	Rural	6,813	747,778	8,052,143	428,263	63,522	38,941	3 85	12.1
	Urban	2,076	3,584	1,829,951	238,675	27,553	13,884	4 81	20.0
	Total	8,889	751,362	9,882,094	666,938	91,075	52,825	4 09	13.6
1883	Rural	6,929	751,420	8,103,670	465,747	58,384	38,603	3 70	11.4
	Urban	2,102	3,517	1,787,965	245,040	29,147	20,004	5 43	24.2
	Total	9,031	754,937	9,891,635	710,787	87,531	58,607	4 14	13.9
1884	Rural	6,915	757,454	8,025,753	484,268	56,736	43,227	3 93	11.7
	Urban	2,255	3,881	1,958,296	279,940	32,841	18,084	5 29	22.8
	Total	9,170	761,335	9,984,049	764,208	89,577	61,311	4 31	14.0
1885	Rural	7,036	763,013	8,058,352	508,464	58,317	40,891	3 86	11.6
	Urban	2,377	3,801	1,945,940	269,893	33,520	21,232	5 49	24.7
	Total	9,413	766,814	10,004,292	778,357	91,837	62,123	4 32	14.3
Peterborough:									
1881	Rural	4,539	520,760	6,983,305	540,869	32,621	24,167	3 09	7.7
	Urban	2,543	3,151	2,847,618	402,363	21,906	12,984	3 56	10.7
	Total	7,082	523,911	9,830,923	943,232	54,527	37,151	3 25	8.5
1882	Rural	4,560	517,253	6,972,534	611,268	34,253	23,582	3 11	7.6
	Urban	2,674	3,181	2,895,408	459,968	21,904	16,474	3 82	11.4
	Total	7,234	520,434	9,867,942	1,071,236	56,157	40,056	3 41	8.8
1883	Rural	4,716	520,311	7,049,666	631,702	32,058	23,993	3 07	7.3
	Urban	2,849	3,134	3,150,325	486,304	30,973	20,409	4 72	14.1
	Total	7,565	523,445	10,199,991	1,118,006	63,031	44,402	3 69	9.5
1884	Rural	4,797	526,790	7,151,228	651,233	29,928	26,635	3 04	7.2
	Urban	2,893	3,118	3,201,154	478,225	27,483	20,407	4 45	13.0
	Total	7,690	529,978	10,352,382	1,129,458	57,411	47,042	3 55	9.1

* No report. The statistics of ratepayers, assessment and municipal taxation for 1883 are here given.
† Including portions of Muskoka throughout.

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Counties.	Number of ratepayers.	Number of acres.	Assessed value of—		Taxes imposed for—		Rate of taxation for Municipal and School purposes—	
			Real property.	Personal property.	Municipal purposes.	School purposes.	Per head of population.	On the dollar.
			$	$	$	$	$ c.	Mills.
PETERBOROUGH.—*Continued.*								
1885 Rural	4,966	527,298	7,107,378	680,149	33,336	27,201	3 25	7.8
1885 Urban	3,096	3,186	3,483,910	485,425	32,695	20,232	4 67	13.3
1885 Total	8,062	530,484	10,591,288	1,165,574	66,031	47,433	3 79	9.7
HALIBURTON:								
1881 Rural	1,324	525,211	606,487	17,432	14,607	6,731	4 09	34.2
1882 Rural	1,324	523,942	595,085	22,236	16,104	7,983	4 43	39.0
1883 Rural	1,387	524,606	419,160	32,561	16,193	8,424	4 84	54.5
1884 Rural	1,386	534,567	499,077	41,518	12,217	7,664	3 70	36.8
1885 Rural	1,411	538,050	567,566	40,512	22,744	7,039	5 90	49.0
HASTINGS:								
1881 Rural	8,920	833,645	8,958,478	441,465	86,047	45,886	4 05	14.0
1881 Urban	1,543	2,602	866,620	48,550	14,131	7,083	3 58	23.2
1881 Total	10,463	836,247	9,825,098	490,015	100,178	52,969	3 98	14.8
1882 Rural	8,926	854,115	8,906,040	492,321	86,411	45,022	4 09	14.0
1882 Urban	1,590	3,482	1,205,379	49,760	16,306	7,989	3 73	19.4
1882 Total	10,516	857,597	10,111,419	542,081	102,717	53,011	4 04	14.6
1883 Rural	9,316	895,492	8,873,693	515,893	84,492	46,322	4 16	13.9
1883 Urban	1,892	3,310	1,229,382	32,800	16,502	10,844	3 88	21.7
1883 Total	11,208	898,802	10,103,075	548,603	100,994	57,166	4 11	14.8
1884 Rural	9,351	906,800	8,902,610	554,799	79,789	48,723	3 97	13.6
1884 *Urban	1,839	3,312	1,260,637	37,000	17,384	15,628	4 45	25.4
1884 Total	11,190	910,112	10,163,247	591,799	97,173	64,351	4 06	15.0
1885 Rural	8,927	927,386	8,995,486	516,688	80,834	47,914	3 93	13.5
1885 *Urban	1,779	3,331	1,289,367	35,250	16,441	12,268	3 43	21.7
1885 Total	10,706	930,717	10,284,853	551,938	97,275	60,182	3 83	14.6
CITIES.								
Belleville:								
1881	2,280	1,495	3,534,266	126,500	51,251	17,726	6 87	18.8
1882	2,324	1,495	3,509,788	101,450	51,009	15,107	6 60	18.3
1883	2,310	1,495	3,575,580	113,350	52,106	16,143	7 29	18.5
1884	2,339	1,645	3,512,259	360,200	40,661	17,487	6 14	15.0
1885	2,746	1,500	3,545,180	295,925	40,332	15,762	5 10	14.6
Brantford:								
1881	1,953	1,781	2,987,320	643,171	43,566	17,939	6 12	16.9
1882	1,999	1,781	3,048,910	652,290	44,414	19,463	5 88	17.3
1883	2,063	1,781	3,175,540	762,700	47,254	18,046	5 95	16.6
1884	2,165	1,781	3,403,720	770,030	54,259	20,813	6 37	18.0
1885	2,244	1,781	3,642,190	756,600	57,184	20,780	6 41	17.7
Guelph:								
1881	2,374	3,210	2,599,270	245,730	56,900	16,057	7 25	25.6
1882	2,374	3,210	2,611,060	251,450	37,213	16,288	5 43	18.7

* No returns from the town of Trenton for 1884 and 1885. The statistics of ratepayers, assessment and municipal taxation for 1883 are here given.

TABLE No. VIII.—ASSESSMENT AND TAXATION.—*Continued.*

Cities.	Number of ratepayers.	Number of acres.	Assessed value of—		Taxes imposed for—		Rate of taxation for Municipal and School purposes—	
			Real property.	Personal property.	Municipal purposes.	School purposes.	Per head of population.	On the dollar.
			$	$	$	$	$ c.	Mills.
Guelph.—*Continued.*								
1883	2,486	3,210	2,680,140	289,800	33,041	15,569	4 93	16.3
1884	2,561	3,210	2,754,810	310,260	36,781	18,522	5 46	18.0
1885	2,684	3,210	2,776,510	273,700	36,603	18,577	5 40	18.1
Hamilton:								
1881	8,853	2,400	12,964,280	2,682,200	234,697	53,000	8 00	18.4
1882	9,400	2,400	13,383,335	2,914,380	244,466	62,850	8 32	18.9
1883	9,929	2,400	14,316,440	3,396,710	267,911	65,000	8 72	18.8
1884	10,173	2,400	14,841,300	3,977,030	290,508	67,090	9 12	19.0
1885	10,640	2,400	15,264,380	4,182,160	291,698	57,500	8 73	18.0
Kingston:								
1881	4,548	1,688	4,419,360	1,046,517	72,368	18,088	6 34	16.5
1882	4,714	1,688	4,514,830	1,203,452	76,282	17,848	6 44	16.5
1883	4,983	1,688	4,681,410	1,335,095	80,260	18,182	6 74	16.4
1884	5,338	2,300	4,809,905	1,402,884	81,512	21,521	6 74	16.6
1885	5,506	2,300	4,905,205	1,473,928	92,816	22,540	7 57	18.1
London:								
1881	6,225	1,252	7,896,216	2,298,703	180,450	38,484	10 85	21.5
1882	5,778	1,252	8,158,890	2,247,550	175,869	48,824	11 01	21.6
1883	6,551	1,252	8,546,279	2,633,537	166,579	39,166	10 13	18.4
1884	6,713	1,252	8,630,525	2,594,608	190,827	38,937	10 96	20.5
1885*	8,687	2,798	9,750,571	2,659,402	225,862	36,930	10 01	21.2
Ottawa:								
1881	9,000	1,829	9,485,000	933,000	161,479	37,377	8 02	19.1
1882	9,025	1,829	9,577,745	1,004,150	158,728	46,843	8 04	19.4
1883	9,050	1,829	9,742,515	954,950	160,462	55,329	8 43	20.2
1884	9,010	1,829	10,037,225	1,067,800	166,575	50,898	7 06	19.6
1885	9,025	1,829	10,348,000	1,197,000	173,175	50,267	6 81	19.4
St. Catharines:								
1881	2,519	2,400	3,516,600	544,860	59,907	19,559	7 93	19.6
1882	2,585	2,400	3,616,500	534,000	62,257	18,482	8 43	19.4
1883	3,314	2,400	3,884,388	736,970	74,866	19,800	9 42	20.5
1884	3,478	3,000	3,938,220	765,425	76,199	20,613	9 75	20.6
1885	3,071	3,000	3,762,435	732,930	73,724	20,095	9 49	20.9
St. Thomas:								
1881	1,989	1,450	2,207,651	332,100	30,477	13,040	4 51	17.1
1882	2,138	1,450	2,557,185	421,500	34,553	14,956	5 13	16.6
1883	2,336	1,450	2,732,460	427,746	36,658	13,975	4 98	16.0
1884	2,433	1,450	2,999,370	433,700	27,808	16,265	4 08	12.3
1885	2,582	1,450	3,216,410	528,389	40,444	20,150	5 43	16.2
Stratford:								
1885	2,090	2,835	2,388,370	114,900	30,790	12,181	4 90	17.2
Toronto:								
1881	27,340	4,867	44,151,187	9,389,724	749,573	121,250	11 32	16.3
1882	25,771	4,867	45,968,926	9,985,973	723,917	152,178	10 77	15.7
1883	27,981	5,632	51,261,047	10,683,616	785,923	180,280	10 53	15.6
1884	29,906	7,760	54,821,478	11,370,833	841,883	189,142	9 80	15.6
1885	31,796	7,620	57,393,764	11,563,942	969,718	220,969	10 65	17.3

* London East annexed.

ASSESSMENT AND TAXATION.

TABLE No. IX.—Summary of Assessment, Taxation, etc., for Municipal and School purposes in the Province for the thirteen years 1873-85.

The Province.		Number of ratepayers.	Number of acres.	Assessed value of— Real property.	Assessed value of— Personal property.	Taxes imposed for— Municipal purposes.	Taxes imposed for— School purposes.	Rate of taxation for Municipal and School purposes— Per head of population.	Rate of taxation for Municipal and School purposes— On the dollar.
				$	$	$	$	$ c.	Mills.
1873	Rural	248,647	19,506,201	195,387,274	20,914,075	1,793,070	1,609,906	3 25	15.7
	Urban	112,065	168,747	107,282,029	29,522,838	1,660,577	542,226	5 42	16.1
	Total	360,712	19,674,948	302,669,303	50,436,913	3,453,647	2,152,132	3 86	15.9
1874	Rural	258,679	19,614,826	206,892,278	20,463,878	1,805,891	1,688,274	3 29	15.4
	Urban	120,893	174,174	118,591,838	26,546,894	1,922,506	677,305	5 89	17.9
	Total	379,572	19,789,000	325,484,116	47,010,772	3,728,397	2,365,579	4 05	16.4
1875	Rural	257,450	19,836,955	302,603,212	25,127,418	1,906,785	1,605,914	3 28	10.7
	Urban	133,313	183,906	136,204,770	28,078,489	2,143,109	730,245	6 09	17.5
	Total	390,763	20,020,861	438,807,982	53,205,907	4,049,894	2,336,159	4 14	13.0
1876	Rural	263,200	20,071,639	340,225,773	25,691,102	1,963,989	1,627,754	3 31	9.8
	Urban	136,339	193,336	146,112,360	27,012,028	2,182,409	749,054	5 94	16.9
	Total	399,539	20,264,975	486,338,133	52,703,130	4,146,398	2,376,808	4 13	12.1
1877	Rural	275,093	20,193,616	355,516,686	25,152,600	2,026,068	1,629,524	3 31	9.6
	Urban	138,827	194,917	152,689,531	26,606,239	2,486,211	826,330	6 47	18.5
	Total	413,920	20,388,533	508,206,217	51,758,839	4,512,279	2,455,854	4 31	12.4
1878	Rural	285,511	20,333,820	368,910,409	24,992,557	2,113,030	1,582,907	3 32	9.4
	Urban	147,164	202,067	158,319,819	26,034,306	2,918,935	900,082	7 23	20.7
	Total	432,675	20,535,887	527,230,228	51,026,863	5,031,965	2,482,989	4 58	13.0
1879	Rural	289,011	20,507,434	373,917,706	23,776,593	2,131,859	1,585,646	3 31	9.4
	Urban	150,662	205,384	163,592,258	24,472,236	2,556,079	883,782	6 32	18.3
	Total	439,673	20,712,818	537,509,964	48,238,829	4,687,938	2,469,428	4 29	12.2
1880	Rural	289,705	20,617,201	374,774,517	22,922,642	2,123,123	1,597,654	3 31	9.4
	Urban	151,680	208,078	163,891,262	23,446,027	2,459,738	931,213	6 14	18.1
	Total	441,385	20,825,279	538,665,779	46,368,669	4,582,861	2,528,867	4 24	12.2
1881	Rural	291,435	20,657,857	383,795,107	23,794,163	2,099,374	1,594,721	3 28	9.1
	Urban	157,787	211,663	168,468,223	26,543,747	2,547,964	933,589	6 22	17.9
	Total	449,222	20,869,520	552,263,330	50,337,910	4,647,338	2,528,310	4 26	11.9
1882	Rural	292,197	20,631,955	389,577,732	24,948,198	2,119,545	1,618,560	3 37	9.0
	Urban	160,559	219,765	176,101,062	27,851,465	2,598,920	994,424	6 25	17.6
	Total	452,756	20,851,720	565,678,794	52,799,663	4,718,465	2,612,984	4 35	11.9
1883	Rural	295,312	20,881,819	400,278,129	26,362,197	2,217,063	1,651,373	3 51	9.1
	Urban	167,872	221,790	182,784,609	30,070,464	2,743,999	1,072,542	6 42	17.9
	Total	463,184	21,103,609	583,062,738	56,432,661	4,961,062	2,723,915	4 53	12.0
1884	Rural	297,514	21,010,778	412,246,224	27,132,652	2,246,895	1,742,754	3 61	9.1
	Urban	172,981	224,553	191,713,715	32,576,882	2,886,852	1,117,655	6 36	17.9
	Total	470,495	21,235,331	603,959,939	59,709,534	5,133,747	2,860,409	4 61	12.0
1885	Rural	302,371	21,130,412	416,515,457	27,517,001	2,314,563	1,724,010	3 60	9.1
	Urban	182,191	226,854	199,422,316	33,281,202	3,133,947	1,160,850	6 58	18.5
	Total	484,562	21,357,266	615,937,773	60,798,203	5,448,510	2,884,860	4 70	12.3

ASSESSED VALUATION.

TABLE No. X.—Showing the average assessed value per acre of Real Property in rural municipalities of the Province for the thirteen years 1873-85.

Counties.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.	1876.	1875.	1874.	1873.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	17 27	15 77	15 93	11 71	11 55	10 82	10 68	11 13	10 71	10 78	10 13	8 13	7 11
Kent	30 37	33 38	20 88	18 93	17 77	17 57	17 12	17 21	17 04	17 12	8 87	7 17	6 67
Elgin	28 70	28 53	28 79	28 46	28 45	28 31	28 12	27 94	27 86	27 94	27 21	18 45	15 63
Norfolk	21 82	20 36	20 42	19 58	19 48	19 34	18 85	18 96	15 94	16 86	15 41	12 01	11 66
Haldimand	25 79	24 87	24 77	24 69	24 90	25 47	24 54	25 14	22 77	22 68	22 38	12 16	11 99
Welland	29 35	28 60	28 75	29 30	28 19	23 70	25 66	21 76	20 84	21 54	21 59	19 61	19 00
Lambton	22 25	20 57	17 84	15 30	13 18	13 09	12 67	13 01	12 44	8 41	7 14	6 56	6 71
Huron	32 71	31 42	30 94	31 09	30 32	30 01	30 02	29 74	29 73	28 78	27 91	11 23	10 01
Bruce	20 98	21 31	20 88	20 57	21 32	20 72	21 04	20 02	18 76	18 89	18 18	10 64	9 30
Grey	14 58	13 84	11 80	11 89	9 53	9 02	9 02	8 63	8 61	8 12	8 05	6 98	6 50
Simcoe	11 11	11 32	11 11	11 16	10 66	10 57	10 34	10 36	9 80	7 92	7 54	6 95	6 89
Middlesex	29 70	29 61	29 45	29 53	28 88	27 81	26 62	25 40	24 11	24 10	19 35	13 25	13 09
Oxford	40 53	40 56	40 86	40 82	40 25	40 44	40 87	40 66	40 59	39 37	37 52	21 16	20 31
Brant	42 55	41 99	41 73	41 10	39 34	38 65	39 55	40 14	39 27	37 29	36 12	26 17	25 71
Perth	34 42	34 63	34 46	34 16	34 28	34 42	34 47	32 06	30 58	28 47	27 95	16 71	17 08
Wellington	22 24	21 55	21 48	20 38	20 30	19 46	18 27	17 01	16 84	15 87	14 57	11 34	11 55
Waterloo	27 83	27 65	27 74	28 26	27 79	27 81	27 54	27 98	27 40	27 60	21 87	20 38	20 37
Dufferin	12 23	11 80	11 91	11 84	12 21	8 87	.....	.....	.....	.....	.....	.....	.....
Lincoln	23 65	23 38	23 53	23 65	22 94	23 36	23 37	23 33	23 90	23 84	23 72	21 83	22 33
Wentworth	39 83	40 04	40 56	35 38	35 02	33 99	34 00	34 71	33 15	33 41	33 24	21 07	21 10
Halton	32 75	33 00	33 24	33 24	33 53	30 89	26 63	27 03	25 48	24 98	19 89	18 66	19 94
Peel	31 40	31 32	31 24	31 25	30 93	30 58	30 71	29 77	29 79	29 85	25 34	24 53	20 46
York	43 43	43 22	44 28	43 80	42 77	43 06	43 45	43 63	42 56	42 04	28 41	23 76	21 77
Ontario	31 78	31 17	30 87	30 89	30 55	32 32	32 75	33 26	32 92	30 97	31 00	16 26	14 81
Durham & Northumberland	26 61	26 67	27 08	27 09	26 96	26 42	27 11	27 18	27 31	27 36	23 38	13 41	11 17
Prince Edward	25 10	25 13	25 00	25 23	24 50	24 70	24 47	25 17	27 17	25 16	24 91	17 73	18 13
Lennox and Ad.	16 22	16 09	16 38	16 23	16 25	15 96	15 49	15 47	14 51	13 37	10 37	8 61	8 96
Frontenac	6 62	6 90	7 08	7 44	7 61	7 39	7 62	7 20	6 60	5 89	4 43	4 46	4 54
Leeds and Gren.	13 26	13 19	13 28	12 72	13 13	13 17	13 56	13 64	13 98	13 19	14 82	7 79	7 60
Dundas, Stormont & Glen	15 66	15 61	15 76	15 92	16 09	15 83	15 94	16 13	10 52	9 75	7 95	7 76	7 69
Prescott & Russell	7 61	7 90	7 73	7 22	7 71	5 52	5 58	5 74	4 90	4 52	4 25	4 03	3 83
Carleton	13 60	13 13	12 93	12 17	12 10	12 15	12 22	12 62	12 78	8 42	7 02	6 49	6 40
Renfrew	2 62	2 74	2 70	2 80	2 84	2 95	2 60	2 86	2 74	2 86	2 92	1 86	1 73
Lanark	6 96	6 93	7 26	7 10	6 96	7 18	7 37	7 36	6 90	6 66	6 58	4 71	3 34
Victoria	10 56	10 60	10 78	10 77	10 94	10 01	10 58	10 35	11 18	11 85	10 31	5 64	5 68
Peterborough	13 48	13 58	13 55	13 48	13 41	13 26	13 60	13 73	14 34	13 73	15 34	4 29	2 81
Haliburton	1 05	93	80	1 14	1 15	1 14	1 14	1 25	1 17	1 19	99	95	.....
Hastings	9 70	9 82	9 91	10 43	10 75	10 58	11 08	11 14	11 58	11 78	7 92	5 39	4 77
The Province	19 71	19 63	19 17	18 88	18 58	18 18	18 23	18 14	17 61	16 95	15 25	10 55	10 02

GOVERNMENT GRANTS TO MUNICIPALITIES.

TABLE No. XI.—Showing the amount of Government grants to County and City municipalities in Ontario for Administration of Justice and for School purposes in the five years 1881-5.

Counties.	For administration of Justice.					For School purposes.				
	1881.	1882.	1883.	1884.	1885.	1881.	1882.	1883.	1884.	1885.
	$	$	$	$	$	$	$	$	$	$
Essex	3,040	3,193	2,524	4,152	4,156	6,240	6,726	6,667	7,253	7,178
Kent	3,097	3,681	2,928	3,430	3,232	7,184	7,650	7,916	8,567	8,445
Elgin	5,234	3,678	3,020	4,411	5,245	5,793	5,077	5,191	5,234	5,035
Norfolk	2,029	2,171	1,801	1,568	2,552	6,055	6,482	6,234	5,788	5,769
Haldimand	2,102	1,665	2,439	2,302	3,242	5,121	5,421	4,956	4,623	4,481
Welland	2,517	2,333	1,327	2,367	3,069	6,247	5,889	6,021	5,876	5,556
Lambton	3,499	2,778	2,536	3,663	2,091	7,472	7,606	7,535	7,748	7,988
Huron	2,838	2,298	1,766	2,750	2,779	11,881	12,235	12,335	12,413	12,024
Bruce	2,740	1,843	2,100	1,088	3,787	9,499	9,804	9,427	9,749	9,642
Grey	3,134	2,177	2,624	2,675	2,837	10,502	10,311	9,979	10,287	9,877
Simcoe	5,209	4,528	3,683	4,388	5,516	15,505	15,586	14,526	14,290	15,128
Middlesex	8,907	5,099	6,303	9,015	10,182	11,395	11,522	11,673	11,770	10,874
Oxford	1,616	1,842	2,580	1,895	2,395	7,883	8,098	7,903	7,883	7,938
Brant	2,999	3,082	3,169	2,588	3,757	3,246	3,229	3,203	3,202	3,137
Perth	2,954	1,939	2,098	2,384	3,481	11,405	11,639	11,354	11,036	7,721
Wellington	2,192	2,690	2,090	3,002	3,353	10,112	10,484	10,271	9,352	9,404
Waterloo	2,092	2,456	3,050	2,189	2,077	7,639	8,170	8,438	8,551	8,597
Dufferin	1,277	1,398	2,024	1,443	858	3,213	3,833	4,100	4,043	4,478
Lincoln	2,194	1,290	2,105	2,420	2,935	4,787	4,977	4,843	4,930	4,797
Wentworth	3,428	3,872	2,796	4,662	6,414	5,406	5,391	5,324	5,207	4,910
Halton	1,644	1,170	965	748	1,337	3,634	3,743	3,666	4,286	3,434
Peel	1,041	1,496	787	1,321	2,177	4,618	4,670	4,673	4,990	4,737
York	11,355	11,828	10,084	16,931	16,935	10,889	11,355	10,341	10,099	9,532
Ontario	3,537	2,294	2,309	2,978	4,035	10,544	10,937	11,112	10,801	11,029
Durham and Northumberland	2,301	3,251	3,971	2,667	3,632	15,555	15,661	15,926	15,176	14,684
Prince Edward	1,325	1,143	1,430	2,907	1,326	3,384	3,413	3,294	3,473	3,384
Lennox and Addington	1,437	2,461	1,194	1,203	2,289	4,779	4,896	4,930	5,166	4,983
Frontenac	3,259	3,019	1,551	1,949	2,565	3,985	4,237	3,833	3,873	3,943
Leeds and Grenville	1,978	1,742	1,106	1,455	1,631	11,011	10,982	11,042	10,924	10,540
Dundas, Stormont and Glengarry	1,466	1,604	1,604	2,486	2,099	10,820	11,175	10,951	10,999	10,742
Prescott and Russell	1,279	1,251	2,143	2,168	2,163	5,325	5,501	5,684	5,618	5,528
Carleton	3,135	4,866	3,534	3,358	6,167	4,406	4,810	4,448	4,341	4,466
Renfrew	1,967	1,630	1,789	2,634	3,859	8,053	8,038	8,991	9,051	8,637
Lanark	1,121	957	1,291	1,291	1,080	7,861	8,043	7,861	8,187	7,470
Victoria	1,909	1,697	1,009	1,387	1,940	9,001	9,454	6,962	9,013	7,627
Peterborough	873	1,220	1,304	1,097	1,774	6,445	6,344	6,344	6,385	6,352
Hastings	1,462	1,505	1,972	1,849	5,306	7,551	6,979	6,787	6,802	6,523
Northern Districts						8,004	10,213	15,733	14,134	17,102
Cities.										
Belleville						2,273	1,987	2,037	2,372	2,234
Brantford						3,636	3,723	3,644	3,373	3,493
Guelph						2,304	2,203	2,299	2,451	2,348
Hamilton						7,648	7,814	7,486	7,483	7,613
Kingston						3,559	3,580	3,588	3,642	3,790
London						4,705	4,846	4,778	4,834	5,796
Ottawa						4,921	4,983	5,491	5,812	6,001
St. Catharines						4,314	4,207	3,708	3,279	3,070
St. Thomas						2,925	3,296	3,240	3,390	3,365
Toronto	1,972	1,050	2,756	2,493	2,729	12,859	12,822	13,713	14,535	16,065
Stratford										3,126
Totals	106,150	98,197	93,762	113,264	137,002	341,594	350,042	350,458	352,291	350,588

IMPORTS AND EXPORTS OF GRAIN AND BREADSTUFFS.

TABLE No. XII.—Statement of Imports and Exports of Wheat, Corn, Barley, Oats, Pease, Flour, etc., for the Dominion of Canada for the ten years ending June 30th, 1886.

——	Total imports.	Total exports.	Exports not produce of Canada.	Net surplus or deficit (–).	Value of total exports.
					$
1877.					
Wheat ..... Bush.	4,589,051	3,559,095	1,167,940	–1,029,956	4,102.210
Indian Corn ..... "	8,260,079	4,083,174	4,081,662	–4,176,905	2,583,173
Barley ..... "	369,801	6,587,180	241.483	6,217,379	4,721,455
Rye ..... "	65,414	95,065	.....	29,651	65,163
Oats ..... "	1,697,968	3,996,156	1,025,872	2,298,188	1,658,079
Pease ..... "	8,669	1,753,439	7,522	1,864,870	1,509,214
Beans ..... "		120,100	.....		119.737
Other grain ..... "	635	3,928	.....	3,293	3,018
Flour of Wheat ..... Bbls.	549,063	276,439	7,834	-274,593	1,525.230
" Rye ..... "	1,969				
Indian Meal ..... "	294,342	1,499	291	-292,843	5,175
Oatmeal ..... "	4,012	33,727	10	29,715	151.386
Other meal ..... "	4,260	283	.....	-3,977	988
1878.					
Wheat ..... Bush.	5,635,411	8,509,243	4,115,708	2,873,832	11,631,128
Indian Corn ..... "	7,387,507	3,987,600	3.986,945	-3,399,907	2,678,289
Barley ..... "	302,147	7,543,342	275,943	7,241,195	4,488,634
Rye ..... "	146,823	452,420	36,595	305,597	279,169
Oats ..... "	2,162,292	2,430,841	90,779	268,549	1,046,285
Pease ..... "	9,589	2,420,049	5	2,481,759	1,984,115
Beans ..... "		71,299	137		76.300
Other grain ..... "	730	5,920	27	5,190	6,008
Flour of Wheat ..... Bbls.	314,520	479.245	2.814	162,842	2,757.688
" Rye ..... "	1,883				
Indian Meal ..... "	226,850	1.389	278	-225,461	4,609
Oatmeal ..... "	3,005	174.511	.....	171,506	754,257
Other meal ..... "	1,615	1,103	.....	-512	4,200
1879.					
Wheat ..... Bush.	4,768,733	9,767,555	3,156,831	4,998,822	9,748,795
Indian Corn ..... "	7,617,421	5,429,359	5,427,530	-2,188,062	2,754.585
Barley ..... "	43,233	5,393,212	9,290	5,349,979	4,793,887
Rye ..... "	74,238	641,694	770	567,456	364.479
Oats ..... "	2,070,535	2,514,598	141.308	444,063	843,619
Pease ..... "	2,343	2,715,252	257	2,712,909	2.056.079
Beans ..... "	7,187	59,175	24	51,988	53.207
Other grain ..... "	37	5,439	.....	5,402	2,399
Flour of Wheat ..... Bbls.	315.044	580,776	5,829	265,143	2,603.118
" Rye ..... "	589				
Indian Meal ..... "	221,488	1,200	368	-220,288	3,407
Oatmeal ..... "	5,478	102,116	2.057	96,638	409,151
Other meal ..... "	1,067	1,663	20	596	4.625
1880.					
Wheat ..... Bush.	7,521,594	12,169,493	7,078,988	4,647,899	13.549.876
Indian Corn ..... "	6,377,387	4,547,942	4,546,373	-1,829,445	2,184,212
Barley ..... "	15,635	7,241,379	1,817	7,225,744	4,482,585
Rye ..... "	18,636	970,463	12,643	951,827	712,223
Oats ..... "	176,926	4,742,028	24,988	4,565,102	1,715,495
Pease ..... "	2,979	3,819,412	22	3,816,433	2.977.545
Beans ..... "	6,466	75,214	23	68,748	76,986
Other grain ..... "	61	15,488	.....	15,427	6.246
Flour of Wheat ..... Bbls.	113,035	561,484	16,893	448,319	3,019,717
" Rye ..... "	130				
Indian Meal ..... "	172,446	1,367	894	-171,079	3,307
Oatmeal ..... "	1.248	111,393	10,472	110,145	477,397
Other meal ..... "	207	1,842	380	1,635	4.693
1881.					
Wheat ..... Bush.	7,339,689	9,092,279	6,568,606	1,752,590	9,636,505
Indian Corn ..... "	7,454,892	5,257,604	5,256 320	-2,197,288	2,615,744
Barley ..... "	16,933	8,811,278	.....	8,794,345	6,261,383
Rye ..... "	225	870,296	.....	870,071	783,840
Oats ..... "	84,934	2,926,532	.....	2,841,598	1,191,873
Pease ..... "	3,787	4,245,590	.....	4,241,803	3,478,003
Beans ..... "	6,504	108,997	74	102,493	117,832
Other grain ..... "	91	2,887	.....	2,796	1,457
Flour of Wheat ..... Bbls.	236,433	501,455	61,727	265,022	2,469,900
" Rye ..... "	94	100	100	6	220
Indian Meal ..... "	178,194	1,517	1,262	-176,677	3,997
Oatmeal ..... "	959	54,480	655	53.521	236,191
Other meal ..... "	240	544	.....	304	1,742

TABLE No. XII.—IMPORTS AND EXPORTS OF GRAIN, ETC.—*Continued.*

	Total imports.	Total exports.	Exports not produce of Canada.	Net surplus or deficit (-).	Value of total exports.
					$
1882.					
Wheat.....Bush.	2,931,220	6,433,533	2,588,498	3,502,313	8,153,610
Indian Corn..... "	3,918,031	2,229,900	2,220,851	-1,688,131	1,353,738
Barley..... "	9,491	11,588,446	.....	11,578,955	10,114,623
Rye..... "	1,447	1,281,678	.....	1,280,231	1,191,119
Oats..... "	73,022	4,148,865	1,911	4,075,843	1,729,300
Pease..... "	3,641	3,521,496	.....	3,517,855	3,191,874
Beans..... "	12,709	95,643	27	82,934	197,687
Other grain..... "	105	187,760	.....	187,655	185,598
Flour of Wheat.....Bbls.	200,716	508,120	38,381	307,262	2,941,740
" Rye..... "	142				
Indian Meal ..... "	133,505	736	706	-132,769	2,473
Oatmeal ..... "	820	49,642	2	48,822	207,710
Other meal..... "	165	4,142	855	3,977	13,074
1883.					
Wheat..... Bush.	4,954,174	10,733,535	4,866,077	5,779,361	11,703,374
Indian Corn..... "	2,425,668	819,605	819,353	-1,606,063	586,020
Barley..... "	16,465	8,817,216	.....	8,800,751	6,293,233
Rye..... "	45,377	1,093,112	45,303	1,047,735	744,613
Oats..... "	222,685	1,024,053	.....	801,368	460,821
Pease..... "	2,353	2,339,287	.....	2,336,934	2,161,708
Beans..... "	23,732	142,429	7	118,697	212,530
Other grain..... "	80	106,018	.....	105,938	59,435
Flour of Wheat.....Bbls.	301,455	526,340	37,294	224,885	2,703,078
" Rye..... "	96	.....	.....	-96	.....
Indian Meal ..... "	130,545	279	231	130,266	1,077
Oatmeal ..... "	1,182	67,016	965	65,834	280,572
Other meal..... "	271	4,433	271	4,162	11,809
1884.					
Wheat.....Bush.	3,604,442	3,021,188	2,275,662	583,254	3,359,192
Indian Corn..... "	5,996,412	3,806,474	3,794,550	-2,189,938	2,485,846
Barley..... "	28,093	7,780,262	.....	7,752,169	5,104,642
Rye..... "	30,459	902,484	29,515	872,025	595,692
Oats..... "	242,615	1,431,744	85,024	1,189,129	534,196
Pease..... "	1,695	2,255,591	54,494	2,253,896	2,059,160
Beans ..... "	15,496	55,924	5	40,428	92,721
Other grain..... "	68	90,576	.....	90,508	59,007
Flour of Wheat.....Bbls.	565,277	284,504	87,115	-280,773	1,440,657
" Rye..... "	99	.....	.....	-99	.....
Indian Meal ..... "	129,239	367	316	-128,872	1,080
Oatmeal ..... "	1,425	60,656	4,755	59,231	247,079
Other meal..... "	244	12,357	1,050	12,113	33,258
1885.					
Wheat.....Bush.	3,128,143	5,423,805	3,082,849	2,295,662	5,061,005
Indian Corn..... "	3,508,529	2,007,674	1,988,789	-1,500,855	1,293,862
Barley..... "	14,717	9,067,395	.....	9,052,678	5,503,833
Rye..... "	17,108	304,341	17,045	287,233	191,163
Oats..... "	314,922	2,367,605	8,603	2,052,683	896,739
Pease..... "	2,739	2,698,778	625	2,696,039	2,078,613
Beans ..... "	15,099	193,620	18	178,521	185,897
Other grain..... "	26	55,455	.....	55,429	53,126
Flour of Wheat.....Bbls.	565,562	161,054	37,277	-404,508	716,739
" Rye..... "	93	.....	.....	-93	.....
Indian Meal ..... "	122,449	483	369	-121,966	1,469
Oatmeal ..... "	1,976	67,108	1,508	65,132	255,239
Other meal..... "	214	7,408	.....	7,194	19,377
1886.					
Wheat..... Bush.	2,373,230	5,705,874	2,286,706	3,332,644	5,190,424
Indian Corn..... "	4,528,878	2,667,401	2,666,907	-1,861,477	1,390,796
Barley..... "	8,212	8,554,302	.....	8,546,090	5,724,693
Rye..... "	18	170,764	.....	170,746	98,666
Oats..... "	220,001	4,215,329	65,341	1,995,328	1,478,435
Pease..... "	4,298	3,219,159	18	3,214,861	2,207,120
Beans..... "	7,240	156,171	83	148,931	156,309
Other grain..... "	23	89,711	.....	89,688	40,701
Flour of Wheat.....Bbls.	215,391	415,397	29,298	200,006	1,875,979
" Rye..... "	116	.....	.....	-116	.....
Indian Meal ..... "	125,107	907	650	-124,200	2,305
Oatmeal ..... "	1,406	79,409	3,483	78,003	320,908
Other meal..... "	182	7,097	705	6,915	21,888

EXPORTS OF THE DOMINION.

TABLE No. XIII.—Statement of the quantities and values of Exports the growth, produce and manufacture of the Dominion of Canada for the eight fiscal years ending June 30, 1886; also, the average prices of articles for each year, computed from the declared values.

Articles.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
The Mine:									
Coal	tons	315,793	344,694	420,055	421,311	430,081	451,631	479,706	493,508
	$	937,268	1,013,899	1,123,091	1,078,704	1,087,411	1,201,172	1,468,166	1,416,160
	$	2.97	2.94	2.67	2.56	2.53	2.66	3.06	2.87
Gold bearing quartz, dust, nuggets, etc.	$	944,095	1,086,994	767,318	930,151	911,383	952,131	999,007	1,210,864
Gypsum, crude	tons	104,974	119,868	130,961	130,062	154,809	155,851	116,415	107,237
	$	90,704	98,503	119,399	127,139	151,844	160,607	120,046	114,736
	$	.86	.82	.91	.98	.98	1.03	1.03	1.07
Oils, mineral, coal & kerosene	gals	797,079	10,611	2,456	662	1,422	327,563	954,966	260,449
	$	97,049	1,049	631	136	368	7,546	27,303	30,957
	cts	12.2	9.9	25.7	20.5	25.9	2.3	2.9	11.9
Ore:									
Antimony	tons	79	8	46	130	368	132	720	903
	$	4,800	327	3,921	4,733	11,842	4,855	33,700	38,320
	$	60.76	40.88	85.24	36.41	32.18	36.78	46.81	42.44
Copper	tons	98	5,883	19,802	44,744	4,402	1,677	1,257	5,224
	$	19,762	150,799	150,412	139,245	150,479	214,044	246,230	291,397
	$	201.65	25.63	7.60	3.11	34.18	127.64	195.89	55.78
Iron	tons	3,562	50,524	44,677	43,835	44,944	25,308	54,367	7,542
	$	7,530	76,474	114,850	135,463	138,775	66,549	132,074	23,039
	$	2.11	1.51	2.57	3.09	3.09	2.63	2.43	3.05
Manganese	tons	589	2,065	2,101	1,425	1,194	885	748	2,074
	$	11,698	27,732	38,738	37,485	29,417	15,851	22,790	45,608
	$	19.86	13.43	18.44	26.31	24.64	17.91	30.47	21.99
Silver	tons	.....	.....	.....	.....	100	37	31	81
	$	637,000	149,146	34,494	15,110	14,200	12,920	7,539	25,137
	$	.....	.....	.....	.....	142.00	349.19	243.19	310.33
Phosphates	tons	11,927	7,974	15,601	17,181	14,478	21,471	18,984	25,974
	$	216,295	119,882	239,493	327,667	302,716	453,322	362,288	431,951
	$	18.13	15.03	15.35	19.07	20.91	21.11	19.08	16.63
Salt	bus	554,711	492,467	253,555	381,476	197,185	181,742	107,523	384,493
	$	48,667	46,190	39,566	36,418	17,511	17,408	12,326	26,749
	cts	8.8	9.4	15.6	9.5	8.9	9.6	11.5	7.0
Sand and gravel	tons	51,847	50,132	55,860	54,593	63,426	61,575	90,015	102,795
	$	9,030	9,832	12,511	13,789	17,755	14,152	23,590	23,195
	$	.17	.20	.22	.25	.28	.23	.26	.23
Slate	tons	.....	20	.....	420	148	864	377	282
	$	.....	76	.....	8,100	3,043	11,445	4,642	4,552
	$	.....	3.80	.....	19.29	20.56	13.25	12.31	16.14
Stone and marble unwrought	tons	19,510	43,209	28,189	39,339	26,578	12,954	15,736	15,259
	$	40,416	67,234	81,924	84,377	73,368	52,478	52,206	61,950
	$	2.07	1.56	2.91	2.14	2.76	4.05	3.32	4.06
Other articles	$	18,586	29,214	41,481	75,056	60,774	62,612	127,630	206,532
Total values	$	3,082,900	2,877,351	2,767,829	3,013,573	2,970,885	3,247,092	3,639,537	3,951,147
The Fisheries:									
Cod, including hadd'ck, ling and pollock, fresh	lbs	.....	.....	150,850	219,883	489,200	130,541	452,000	276,469
	$	.....	.....	3,170	4,135	14,846	4,749	3,746	1,786
	cts	.....	.....	2.1	1.9	3.0	3.6	0.8	0.6
do dry salt'd	cwt	806,889	939,096	943,304	872,423	725,334	850,582	847,703	761,222
	$	3,195,331	3,561,141	3,164,665	3,387,811	3,653,083	3,739,600	3,053,321	2,384,500
	$	3.96	3.79	3.35	3.88	5.04	4.39	3.60	3.13
do wet salt'd	cwt	159	245	2,330	9,942	23,792	25,932	32,773	12,715
	$	622	550	9,553	32,875	110,496	89,607	92,912	33,306
	$	3.91	2.24	4.10	3.30	4.64	3.46	2.84	2.62

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

Articles.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
The Fisheries: —*Continued.*									
Cod, including had'k, ling & pollock, pickl'd	bbls	327	483	770	478	1,562	1,337	589	97,307
	$	1,162	2,225	2,173	1,582	8,461	5,735	1,272	281,353
	$	3.55	4.61	2.82	3.31	5.42	4.29	2.16	2.89
do smoked	lbs	....	....	12,200	19,510	28,078	5,770	....	....
	$	....	....	453	1,233	2,000	223	....	....
	cts	....	....	3.7	6.3	7.1	3.9	....	....
Mackerel, fresh	lbs	92,486	29,409	729,962	297,251	488,095	700,703	531,742	333,794
	$	4,641	1,424	22,355	13,039	18,372	29,589	9,017	13,916
	cts	5.0	4.8	3.1	4.4	3.8	4.2	1.7	4.2
do pickled	bbls	141,365	152,341	167,285	74,841	67,449	95,816	119,757	96,446
	$	809,304	683,982	794,194	453,113	520,335	876,797	802,942	509,374
	$	5.72	4.49	4.75	6.05	7.71	9.15	6.70	5.28
Halibut, fresh	lbs	....	11,096	79,865	146,080	183,502	344,520	230,866	233,140
	$	....	853	4,095	6,851	12,161	12,311	7,358	13,266
	cts	....	7.7	5.1	4.7	6.6	3.6	3.2	5.7
do pickled	bbls	....	1	2	22	18	60	45	....
	$	....	1	12	132	92	519	240	....
	$	....	1.00	6.00	6.00	5.11	8.65	5.33	....
Herring, fresh	lbs	1,596,900	3,585,700	4,960,561	4,811,799	1,409,050	1,097,786	1,556,105	3,446,036
	$	7,556	23,046	34,104	51,568	26,857	18,373	16,450	29,724
	cts	0.5	0.6	0.7	1.1	1.9	1.7	1.1	0.9
do pickled	bbls	113,515	97,119	85,624	98,007	123,883	137,370	151,169	69,256
	$	390,460	336,419	302,502	356,316	505,730	539,911	463,389	202,605
	$	3.44	3.46	3.53	3.64	4.08	3.93	3.07	2.93
do smoked	lbs	3,721,368	6,185,713	8,464,526	10,730,637	8,452,529	7,859,948	10,442,712	5,493,806
	$	48,968	95,790	127,220	159,821	169,385	154,257	150,593	74,530
	cts	1.3	1.5	1.5	1.5	2.0	2.0	1.4	1.4
Sea-fish, other, fresh	$	16,337	12,777	3,079	1,562	150,264	211,369	30,300	44,605
do pickled	bbls	6,070	8,148	9,970	10,455	8,729	7,607	6,877	3,050
	$	31,860	40,712	46,328	39,453	41,078	33,573	26,246	11,695
	$	5.25	5.00	4.65	3.77	4.71	4.41	3.82	3.83
do pres'v'd	lbs	17,132	....	96,280	118,086	682	108,495	....	6,940
	$	1,682	2,402	7,419	8,995	111	11,748	....	221
	cts	9.8	....	7.7	7.6	16.3	10.8	....	3.2
Oysters, fresh	bbls	409	267	451	360	412	542	525	2,686
	$	750	484	959	742	849	1,091	932	6,063
	$	1.83	1.81	2.13	2.06	2.06	2.01	1.78	2.26
do in cans	lbs	10,521	480	....	1,824	24	....	15,071	1,216
	$	1,838	109	....	309	3	....	918	283
	cts	17.5	22.7	....	16.9	12.5	....	6.1	23.3
Lobsters, fresh	bbls	301	475	399	2,922	5,107	10,103	20,687	32,077
	$	579	803	1,328	14,410	31,364	40,916	52,469	81,761
	$	1.92	1.69	3.33	4.93	6.14	4.05	2.54	2.55
do pres'v'd	lbs	10,471,638	8,791,779	13,295,502	14,809,152	15,106,980	10,818,187	14,584,890	14,094,572
	$	1,103,960	917,987	1,347,901	1,431,741	1,478,895	1,145,644	1,653,178	1,662,992
	cts	10.5	10.4	10.1	9.7	9.8	10.6	11.3	11.8
Salmon, fresh	lbs	2,451,463	1,760,567	1,232,169	1,016,888	1,262,809	1,059,761	2,133,154	2,159,500
	$	229,862	181,405	125,378	139,053	180,563	152,035	223,249	219,518
	cts	9.4	10.3	10.2	13.7	14.3	14.3	10.5	10.2
do smoked	lbs	26,545	22,282	4,028	4,487	8,743	15,867	8,411	5,238
	$	2,918	2,598	470	739	1,318	2,007	1,224	1,025
	cts	11.0	11.7	11.7	16.5	15.1	12.6	14.6	19.6
do canned	lbs	4,965,008	2,892,141	2,842,183	7,488,020	10,977,223	7,348,417	5,040,940	4,087,223
	$	614,817	302,725	297,992	897,172	1,156,223	802,017	510,893	413,817
	cts	12.4	10.5	10.5	12.0	10.5	10.9	10.1	10.1

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

ARTICLES.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
THE FISHERIES: —*Continued.*									
Salmon, pickled	bbls	8,070	4,881	3,821	6,589	6,143	4,774	7,330	5,327
	$	78,911	60,224	46,622	76,463	83,746	67,832	73,551	48,416
	$	9.78	12.34	12.20	11.60	13.63	14.21	10.03	9.09
Fish, all other, fresh	$	133,222	157,954	211,679	258,996	240,912	342,074	447,396	426,913
do pickled	bbls	2,790	761	1,028	3,987	6,488	4,959	2,696	1,801
	$	14,551	3,861	4,910	27,143	33,144	23,767	10,840	10,659
	$	5.22	5.07	4.78	6.81	5.11	4.79	4.02	5.92
Fish Oil:									
Cod	gals	184,734	249,482	184,052	214,240	228,762	260,150	175,734	98,041
	$	76,505	89,837	90,556	99,756	122,731	125,634	67,076	45,337
	$	.41	.36	.49	.47	.54	.48	.38	.46
Seal	gals	22,194	32,596	4,963	44,205	3,003	6,013	777	.....
	$	10,647	13,226	2,443	17,727	1,622	3,464	459	.....
	$	.48	.41	.49	.40	.54	.58	.59	.....
Whale	gals	4,620	.....	10,347	10,876	1,800	9,771	5,417	6,426
	$	3,242	.....	4,802	5,151	723	4,242	2,447	2,664
	$	.70	.....	.46	.47	.40	.43	.45	.41
Other	gals	143,586	49,921	77,132	114,622	83,031	52,245	113,565	51,538
	$	40,925	15,456	22,735	38,660	32,089	20,229	47,263	15,746
	$	.29	.31	.29	.34	.39	.39	.42	.31
Furs and skins of marine animals	$	29,393	19,581	105,246	79,688	145,042	87,828	179,242	231,910
Other articles	$	78,828	52,084	83,381	75,843	66,623	44,513	31,078	75,403
Total values	$	6,928,871	6,579,656	6,867,715	7,682,079	8,809,118	8,591,654	7,960,001	6,843,388
THE FOREST:									
Ashes, leached	$	10,260	14,446	10,215	17,308	49,994	21,161	16,613	16,106
do pot and pearl	bbls	11,056	11,980	10,149	11,109	7,801	7,495	5,959	5,543
	$	244,767	304,381	290,586	328,879	268,055	224,544	156,322	131,163
	$	22.14	25.41	28.63	29.60	34.36	29.96	26.23	23.66
Bark for tanning	crds	65,892	112,813	101,553	91,791	65,194	75,982	74,798	49,014
	$	227,986	441,360	481,758	431,562	321,991	399,598	364,053	221,815
	$	3.46	3.91	4.74	4.70	4.94	5.26	4 87	4.53
Basswood, butternut & hickory.	m.ft	610	1,925	1,895	1,417	1,560	1,250	1,459	815
	$	9,884	23,604	36,581	32,858	36,167	29,951	26,474	18,611
	$	16.20	12.26	19.30	23.19	23.18	23.96	18.15	22.84
Firewood	crds	155,293	152,968	145,594	170,575	164,900	158,697	145,248	155,178
	$	299,709	295,187	312,170	367,484	388,910	353,829	316,647	313,480
	$	1.93	1.93	2.14	2.15	2.36	2.23	2.18	2.02
Hop, hoop, telegraph and other poles	$	46,615	168,969	159,594	205,054	227,191	181,046	84,789	106,745
Knees and futtocks	pcs	7,317	15,017	9,093	25,331	36,588	23,943	12,895	12,430
	$	6,193	26,241	8,102	26,213	33,660	18,691	9,619	6,031
	$	.85	1.75	.89	1.03	.92	.78	.75	.49
Lathwood	crds	1,087	895	1,324	578	501	466	455	214
	$	8,935	6,947	7,272	4,626	4,031	3,421	1,843	1,785
	$	8.22	7.76	5.49	8.00	8.05	7.34	4.05	8.34
Logs:									
Hemlock	m.ft	1,375	4,125	5,399	3,761	4,374	4,869	3,643	7,001
	$	3,408	11,779	14,452	13,122	20,814	19,639	14,890	28,885
	$	2.48	2.86	2.68	3.49	4.76	4.03	4.09	4.13
Oak	m.ft	1,056	2,821	3,784	5,019	1,820	2,225	1,151	1,190
	$	10,472	32,789	49,648	74,883	29,819	30,399	15,671	14,417
	$	9.92	11.62	13.12	14.92	16.38	13.66	13.62	12.12
Pine	m.ft	108	2,075	2,640	1,313	2,863	974	380	2,869
	$	1,071	13,771	20,276	16,001	18,812	8,012	2,300	24,452
	$	9.92	6.64	7.68	12.19	6.57	8.23	6.05	8.52

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

Articles.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Logs—Continued.									
Spruce	m.ft	4,041	6,036	4,332	5,980	6,255	6,820	11,168	17,566
	$	14,382	19,272	15,584	22,681	30,858	31,793	49,474	82,016
	$	3.56	3.19	3.60	3.79	4.93	4.66	4.43	4.67
All other	m.ft	18,451	18,984	21,677	30,762	28,872	31,081	31,487	37,667
	$	65,444	56,426	96,114	156,448	162,249	140,027	143,523	164,195
	$	3.55	2.97	4.43	5.09	5.62	4.51	4.56	4.36
Lumber, viz:									
Battens	pcs	35,593	57,442	43,408	46,183	24,296	24,242	.....	.....
	$	9,424	13,319	10,693	10,739	4,591	4,244	12,640	10,979
	$	.26	.23	.25	.23	.19	.18	.....	.....
Deals	st. h	199,283	213,613	260,305	263,594	266,068	286,214	211,604	244,977
	$	5,017,852	5,775,634	8,676,768	7,945,501	8,656,541	8,595,623	6,385,277	7,652,828
	$	25.18	27.04	33.33	30.14	32.53	30.03	30.18	31.24
Deal ends	st. h	11,128	9,493	10,793	10,101	12,125	12,774	9,828	10,982
	$	225,767	222,501	324,914	246,007	329,545	315,815	265,039	302,035
	$	20.29	23.44	30.01	24.35	27.18	24.72	26.97	27.50
Laths, palings and pickets.	m	117,977	122,899	177,392	162,293	157,842	212,584	147,707	150,288
	$	136,486	143,268	180,754	208,781	230,637	351,460	270,227	258,259
	$	1.16	1.17	1.02	1.29	1.46	1.65	1.83	1.72
Planks, boards and joists.	m.ft	446,026	681,202	652,621	699,777	632,148	670,701	655,900	585,203
	$	4,119,196	5,880,281	7,101,532	8,267,862	8,022,095	8,439,994	8,053,878	6,637,878
	$	9.24	8.63	10.88	11.81	12.69	12.58	12.28	11.34
Scantling	m. ft	21,109	17,997	19,118	20,137	15,607	16,361	15,631	18,104
	$	126,981	113,721	132,725	149,078	115,414	118,133	119,575	151,370
	$	6.02	6.32	6.94	7.40	7.40	7.22	7.65	8.36
Staves, standard	m	532	1,655	533	710	770	127	566	526
	$	104,577	129,071	107,470	108,958	95,696	42,113	13,705	14,521
	$	196.57	77.99	201.63	153.46	124.28	331.60	24.21	27.61
do other & headings	m	4,692	9,735	12,868	31,258	38,176	55,231	67,300	81,085
	$	70,114	80,826	102,863	185,059	250,953	291,562	345,796	330,686
	$	14.94	8.30	7.99	5.92	6.57	5.28	5.14	4.08
All other n.e.s	$	17,694	32,583	45,982	88,506	91,941	158,877	201,907	357,344
Masts and spars	pcs	21,757	27,859	74,194	34,921	27,597	28,260	17,398	25,243
	$	21,179	33,426	54,595	35,520	44,197	45,530	42,691	37,454
	$	.97	1.20	.74	1.02	1.60	1.61	2.45	1.48
Oars	prs	436	3,059	556	558	867	368	.....	.....
	$	940	608	870	1,007	1,922	894	.....	.....
	$	2.16	.20	1.56	1.80	2.22	2.43	.....	.....
Shingles	m	79,073	67,361	93,313	99,346	100,411	94,951	79,176	69,154
	$	149,346	121,445	188,444	238,585	283,530	207,984	183,732	142,347
	$	1.89	1.80	2.02	2.40	2.82	2.19	2.32	2.06
Shingle bolts	crds	121	717	1,168	1,516	637	721	756	271
	$	385	2,202	3,386	5,653	2,685	2,857	2,906	936
	$	3.18	3.07	2.90	3.73	4.22	3.96	3.84	3.45
Sleepers and railroad ties.	pcs	1,010,585	913,296	3,651,955	2,743,848	2,126,668	1,429,319	760,435	1,358,398
	$	191,076	184,497	324,568	637,969	554,328	415,313	197,826	367,457
	$	.19	.20	.09	.23	.26	.29	.26	.27
Stave bolts	crds	15,477	35,300	40,996	153,495	66,701	47,408	39,616	50,333
	$	30,959	83,853	100,574	160,376	211,484	132,183	97,863	116,900
	$	2.00	2.38	2.45	1.04	3.17	2.79	2.47	2.32
Sugar box shooks.	No	.....	.....	161,208	.....	99,884	51,975	58,110	806,558
	$	95,899	69,510	69,415	80,482	50,699	30,213	28,710	86,106
	$	.....	.....	.43	.....	.51	.58	.49	.11
Timber, square, viz:									
Ash	tons	2,529	4,591	9,302	7,706	8,202	9,098	8,452	7,119
	$	20,772	43,195	108,053	95,621	101,184	115,095	111,770	83,490
	$	8.21	9.41	11.62	12.41	12.34	12.65	13.22	11.73

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

Articles.		1879.	1880.	1881.	1882	1883.	1884.	1885.	1886.
Timber—Con.									
Birch	tons	21,187	34,452	36,655	25,360	25,355	42,396	31,803	37,735
	$	126,620	226,873	255,826	170,081	194,345	301,204	246,031	265,273
	$	5.98	6.59	6.98	6.71	7.66	7.10	7.74	7.03
Elm	tons	8,615	14,578	28,905	17,465	22,830	16,303	18,028	19,667
	$	97,694	156,645	375,610	206,560	276,822	215,943	257,168	259,768
	$	11.34	10.75	12.99	11.83	12.13	13.25	14.26	13.21
Maple	tons	34	64	197	934	788	759	233	174
	$	318	523	2,280	12,838	9,977	8,383	3,001	1,799
	$	9.35	8.17	11.57	13.75	12.66	11.04	12.88	10.34
Oak	tons	26,779	43,110	67,161	37,629	47,802	44,201	29,366	36,492
	$	408,521	592,083	1,208,605	748,109	976,330	890,497	575,575	704,986
	$	15.26	13.73	18.00	19.88	20.42	20.15	19.60	19.32
Pine, white	tons	127,478	148,801	334,153	194,979	213,995	251,297	173,223	167,639
	$	1,086,078	1,214,159	3,524,317	2,188,845	2,852,908	3,168,236	2,019,310	1,750,529
	$	8.52	8.16	10.55	11.23	13.33	12.61	11.66	10.44
Pine, red	tons	20,439	19,911	37,445	21,704	25,843	26,605	13,477	16,897
	$	140,693	137,013	321,206	188,466	223,298	207,792	101,210	131,043
	$	6.88	6.88	8.58	8.68	8.64	7.81	7.51	7.76
All other	tons	3,450	3,761	9,809	8,409	6,294	6,342	6,482	3,235
	$	42,041	55,914	109,689	95,394	82,492	92,407	100,221	75,732
	$	12.19	14.87	11.18	11.34	13.11	14.57	15.46	23.41
Other articles	$	71,721	126,185	126,521	217,939	114,561	196,694	151,432	165,190
Total values	$	13,261,459	16,854,507	24,960,012	23,991,055	25,370,726	25,811,157	20,989,708	21,034,611
Animals and their produce:									
Horses	No	16,629	21,393	21,993	20,920	13,019	11,595	11,978	16,525
	$	1,376,794	1,880,379	2,094,037	2,326,637	1,633,291	1,617,829	1,554,629	2,147,584
	$	82.79	87.90	95.21	111.21	125.45	139.52	129.79	129.96
Horned cattle	No	46,569	54,944	62,277	62,106	66,396	89,263	143,003	91,866
	$	2,096,696	2,764,437	3,464,871	3,256,330	3,898,028	5,681,082	7,377,777	5,825,188
	$	45.02	50.31	55.64	52.43	58.70	63.64	51.59	63.41
Swine	No	6,803	6,229	2,819	3,263	3,858	3,883	1,652	2,994
	$	60,142	41,281	11,841	10,875	12,281	14,243	7,283	7,588
	$	8.84	6.63	4.20	3.33	3.18	3.67	4.40	2.53
Sheep	No	308,093	398,726	354,155	311,669	308,474	304,403	335,043	359,407
	$	988,045	1,422,830	1,372,127	1,228,957	1,388,056	1,544,605	1,261,071	1,182,241
	$	3.21	3.57	3.87	3.94	4.50	5.07	3.76	3.29
Poultry, etc	$	90,880	141,034	133,963	149,804	161,229	192,908	175,475	126,162
Bones	cwt	45,681	61,969	60,194	63,135	53,546	57,528	59,203	141,508
	$	44,425	48,415	55,686	54,068	56,131	47,527	53,345	94,895
	$	.97	.78	.92	.86	1.05	.83	.90	.67
Butter	lbs	14,307,977	18,535,362	17,649,491	15,161,839	8,106,447	8,075,537	7,330,788	4,668,741
	$	2,101,897	3,058,069	3,573,034	2,936,156	1,705,817	1,612,481	1,430,905	832,355
	cts	14.7	16.5	20.2	19.4	21.0	20.0	19.5	17.8
Cheese	lbs	46,414,035	40,368,678	49,255,523	50,807,049	58,041,387	69,755,423	79,655,367	78,112,927
	$	3,790,300	3,893,366	5,510,443	5,500,868	6,451,870	7,251,989	8,265,240	6,754,626
	cts	8.2	9.6	11.2	10.8	11.1	10.4	10.3	8.6
Lard	lbs	312,443	498,680	209,679	135,169	51,203	214,772	63,559	95,790
	$	18,464	31,270	19,882	13,869	5,855	21,425	5,491	6,722
	cts	5.9	6.3	9.5	10.3	11.4	10.0	8.6	7.0
Furs	$	1,191,356	1,035,625	1,983,096	1,278,340	1,087,523	1,119,756	1,626,826	1,656,204
Hides, skins, horns and hoofs	$	387,592	709,163	432,498	375,565	460,983	435,898	601,111	469,087
Honey	lbs	398	6,070	8,915	2,438	875	1,079	3,278	9,363
	$	51	1,857	1,163	316	107	178	440	1,096
	cts	12.8	30.6	13.0	13.0	12.2	16.5	13.4	11.7
Eggs	doz	5,440,823	6,452,580	9,090,135	10,499,082	13,451,410	11,490,855	11,542,703	12,758,532
	$	574,093	740,665	1,103,812	1,643,709	2,256,586	1,960,197	1,830,632	1,728,082
	cts	10.6	11.5	12.1	15.7	16.8	17.1	15.9	13.5

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

Articles.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Meats, viz.:									
Bacon	lbs	3,977,276	8,616,739	9,785,089	9,758,027	3,736,724	7,546,807	7,189,260	8,143,503
	$	242,851	467,790	717,589	1,071,394	436,973	731,590	630,614	621,016
	cts	6.1	5.4	7.3	11.0	11.7	9.7	8.8	7.6
Hams	lbs	669,878	955,603	569,598	615,947	517,636	571,163	962,827	422,987
	$	45,764	66,203	40,745	64,367	62,285	62,212	86,641	32,836
	cts	6.8	6.9	7.2	10.5	12.0	10.9	9.0	7.8
Beef	lbs	2,050,672	692,842	1,372,809	749,742	628,728	423,915	542,209	533,353
	$	148,587	41,948	83,738	49,798	40,722	27,469	34,517	28,745
	cts	7.2	6.1	6.1	6.6	6.5	6.5	6.4	5.4
Mutton ...	lbs	300,915	100,888	173,798	334,548	397,280	176,835	330,376	421,715
	$	17,583	5,424	8,814	18,732	22,826	10,990	18,731	22,146
	cts	5.8	5.4	5.1	5.6	5.7	6.2	5.7	5.3
Pork	lbs	498,290	1,281,391	1,578,168	1,225,408	806,843	630,970	555,436	346,105
	$	25,383	67,280	113,694	93,621	69,969	44,518	35,269	18,911
	cts	5.1	5.3	7.2	7.6	8.7	7.1	6.3	5.5
Tongues...	lbs	41,823	61,774	68,916	72,316	32,596	8,106	131,498	117,132
	$	2,661	4,385	4,765	6,094	1,801	521	10,878	8,757
	cts	6.4	7.1	6.9	8.4	5.5	6.4	8.3	7.5
Venison ..	lbs	480	3,300	7,352	8,340	11,525	60	.....	.....
	$	49	149	364	431	648	5	.....	.....
	cts	10.2	4.5	5.0	5.2	5.6	8.3	.....	.....
Preserved n.e.s.	lbs	670,216	1,171,184	1,040,251	1,286,005	1,770,774	1,793,249	499,187	892,863
	$	86,100	124,591	103,289	124,888	180,080	160,212	37,495	90,667
	cts	12.8	10.6	9.9	9.7	10.2	8.9	7.5	10.2
Sheep pelts.	No	124,562	136,564	48,574	43,853	84,799	101,987	73,324	134,691
	$	28,924	51,431	13,201	10,664	18,157	28,740	20,515	28,901
	$	.23	.38	.27	.24	.21	.28	.28	.21
Tallow	lbs	1,054,627	818,474	855,327	942	3,864	136,521	62,624	68,700
	$	72,065	50,451	66,173	61	710	8,929	4,034	4,730
	cts	6.8	6.2	7.7	6.5	18.4	6.9	6.4	6.9
Wool	lbs	3,013,587	3,619,181	1,404,123	1,053,305	1,375,572	1,501,031	989,925	1,524,184
	$	691,894	920,923	409,683	246,657	280,530	310,060	196,178	316,937
	$	.23	.25	.29	.23	.20	.21	.20	.21
Other articles....$		18,008	38,611	41,711	56,461	51,885	60,744	72,007	59,957
Total values..$		14,100,604	17,607,577	21,360,219	20,518,662	20,284,343	22,946,108	25,337,104	22,065,433
Agricultural products:									
Bran	cwt	40,568	89,113	90,130	56,459	24,561	52,072	62,881	116,107
	$	31,843	52,738	52,241	39,590	21,806	46,637	46,677	64,513
	$	.78	.60	.58	.70	.89	.90	.74	.56
Flax	cwt	5,864	10,137	6,286	6,509	11,634	5,312	7,060	7,286
	$	46,194	95,502	67,874	85,537	108,220	73,779	59,904	49,301
	$	7.88	9.42	10.80	13.14	9.30	13.89	8.48	6.77
Fruit, green, viz.:									
Apples	bbls	87,101	146,548	334,538	212,526	158,018	51,019	238,936	222,743
	$	157,618	347,166	645,658	540,464	499,185	173,048	602,260	477,004
	$	1.81	2.37	1.93	2.54	3.16	3.39	2.52	2.14
Other	$							32,980	22,594
Grain and Products of, viz.:									
Wheat	bush	6,610,724	5,090,505	2,523,673	3,845,035	5,867,458	745,526	2,340,956	3,419,168
	$	6,274,640	5,942,042	2,593,820	5,180,335	5,881,488	812,923	1,966,287	3,025,864
	$	.95	1.17	1.03	1.35	1.00	1.00	.84	.88
Indian Corn	bush	1,829	1,569	1,284	49	252	11,924	18,885	494
	$	999	965	594	61	293	8,941	11,399	313
	$	.55	.62	.46	1.24	1.17	.75	.60	.63
Barley	bush	5,383,922	7,239,562	8,811,278	11,588,446	8,817,216	7,780,262	9,067,395	8,554,302
	$	4,789,487	4,481,685	6,261,383	10,114,623	6,293,238	5,104,642	5,503,833	5,724,693
	$	.89	.62	.71	.87	.71	.66	.61	.67

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

Articles.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Grain.—Con.									
Rye	bush	640,924	957,820	870,296	1,281,678	1,047,809	872,969	287,296	170,764
	$	364,017	702,701	783,840	1,191,119	712,900	565,663	179,873	98,666
	$	.57	.73	.90	.93	.68	.65	.63	.58
Oats	bush	2,373,290	4,717,040	2,926,532	4,146,954	1,024,053	1,346,720	2,359,002	4,149,988
	$	804,325	1,707,326	1,191,873	1,728,774	460,821	501,712	893,513	1,453,996
	$	.34	.36	.41	.42	.45	.37	.38	.35
Pease	bush	2,714,995	3,819,390	4,245,490	3,521,493	2,339,287	2,201,097	2,698,153	3,219,141
	$	2,055,872	2,977,516	3,478.003	3,191,869	2,161,708	2,009,275	2,077,762	2,207,093
	$	.76	.78	.82	.91	.92	.91	.77	.69
Beans	bush	59,151	75,191	108,923	95,616	142,422	55,919	193,602	156,088
	$	53,162	76,948	117,708	197,602	212,514	92,702	185,869	156,114
	$	.90	1.02	1.08	2.07	1.49	1.66	.96	1.00
Other grain	bush	5,439	15,488	2,887	187,760	106,018	90,576	55,455	89,711
	$	2,399	6,246	1,457	185,598	59,435	59,007	33,126	40,701
	$	.44	.40	.50	.99	.56	.65	.59	.45
Flour of wheat	bbls	574,947	544,591	439,728	469,739	489,046	197,389	123,777	386,099
	$	2,572,675	2,930,955	2,173,108	2,748,988	2,515,955	1,025,995	556,530	1,744,969
	$	4.47	5.38	4.94	5.85	5.14	5.20	4.50	4.52
Indianmeal	bbls	832	473	255	30	48	51	114	257
	$	2,317	1,050	784	125	202	126	371	840
	$	2.78	2.22	3.07	4.16	4.20	2.47	3.25	3.27
Oatmeal	bbls	100,059	100,921	58,825	49,640	66,051	55,901	65,600	75,926
	$	401,370	438,020	234,150	207,698	276,574	230,294	250,319	309,631
	$	4.01	4.34	3.98	4.18	4.19	4.12	3.82	4 08
Other meal	bbls	1,643	1,462	544	3,287	4,162	11,307	7,408	6,392
	$	4,578	3,777	1,742	10,609	10,816	30,203	19,377	20,191
	$	2.79	2.58	3.20	3.23	2.60	2.67	2.62	3.16
Hay	tons	11,704	64,444	168,381	90,647	93,740	108,461	134,939	93,944
	$	105,643	484,967	1,813,208	915,691	902,105	913,057	1,270,525	1,001,336
	$	9.03	7.53	10.77	10.10	9.62	8.42	9.42	10.66
Hops	lbs	102,499	388,330	10,500	201,767	177,142	117,266	103,438	136,577
	$	7,535	45,120	2,712	41,780	89,859	16,402	17,292	80,383
	$	.07	.12	.26	.20	.51	.14	.17	.59
Malt	bush	505,929	1,056,294	708,771	1,171,580	1,329,958	235,959	374,961	284,443
	$	423,343	843,570	649,857	1,108,943	1,136,700	178,330	280,137	222,187
	$	.84	.80	.92	.95	.85	.76	.75	.78
Maple sugar	lbs	1,888	119,332	172,285	277,782	169,662	391,348	11,704	150,955
	$	192	7,985	14,616	20,864	12,358	25,018	1,016	10,870
	cts	10.2	6.7	8.5	7.5	7.3	6.4	8.7	7.2
Potatoes	bush	2,654,422	1,423,415	2,295,307	3,800,162	2,424,979	753,435	660,715	2,222,927
	$	1,261,389	459,668	830,218	2,268,769	1,048,954	231,716	234,812	492,702
	$	.48	.32	.36	.60	.43	.31	.35	.22
Seeds, other	$	190,879	591,065	204,476	913,215	207,052	80,464	116,267	140,025
Tobacco leaf	lbs	39,644	10,150	6,351	66,824	32,249	118	.....	.....
	$	3,384	766	2,332	6,337	6,469	25	.....	.....
	$	.09	.08	.37	.09	.20	.21	.....	.....
Vegetables	$	25,023	40,400	67,745	195,435	91,887	92,280	75,062	64,006
Other articles	$	49,580	56,150	80,128	141,686	107,985	125,604	103,102	244,787
Total values	$	19,628,464	22,294,328	21,269,527	31,035,712	22,818,519	12,397,843	14,518,293	17,652,779
Manufactures: Agricultural implements	$	79,911	59,128	31,269	46,142	16,766	17,252	22,640	16,658
Books, maps and pamphlets	$	19,519	30,961	31,321	23,223	45,551	105,486	155,511	86,677
Biscuits	cwt	6,557	5,981	3,981	4,919	4,437	3,927	4,176	3,359
	$	24,298	20,631	17,228	22,095	19,326	18,031	18,936	15,384
	$	3.71	3.45	4.33	4.49	4.36	4.59	4.53	4.58

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

Articles.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Manufactures:—*Continued.*									
Candles	lbs	43,149	41,834	6,152	186	4,447	6,463	200	397
	$	4,899	4,574	836	29	685	1,109	47	65
	cts	11.4	10.9	13.6	15.6	15.4	16.1	23.5	16.4
Carriages, etc	No	612	867	789	426	293	318	285	361
	$	43,984	40,480	46,442	32,056	21,714	21,756	17,765	22,369
	$	71.87	46 69	58.35	75.25	74.11	68.41	62.32	61.96
Clothing (wearing apparel)	$	23,053	8,742	9,952	6,846	10,057	15,521	15,055	12,984
Cordage, etc	$	23,279	14,084	12,031	11,506	11,355	14,593	44,279	24,763
Cottons	$	1,418	4,170	1,540	1,372	11,565	10,931	37,191	20,632
Extract of hemlock bark	bbls	10,602	18,641	22,034	29,375	40,323	27,946	15,766	13,899
	$	101,897	171,808	190,068	234,908	305,418	361,156	203,211	167,017
	$	9.61	9.22	8.63	8.00	7.57	12.92	12.89	12.02
Furs	$	10,643	4,669	3,223	2,746	3,476	5,369	9,443	3,811
Glass & glassware	$	708	6,070	2,441	1,920	1,823	1,825	1,136	4,050
Grindstones	$	46,301	45,006	35,755	45,477	51,726	40,492	31,082	21,110
Gypsum (ground)	$	2,542	8,925	13,388	11,041	8,950	12,321	22,207	19,044
Hats and Caps	$	339	400	108	1,639	914	655	736	375
India rubber	$	1,430	2,897	870	897	3,614	4,208	4,512	4,206
Iron:									
Stoves	No	382	113	240	53	64	89	63	180
	$	5,270	1,552	3,309	1,035	798	1,554	878	2,960
	$	13.80	13.73	13.79	19.53	12.47	17.46	13.94	16.44
Castings, n.e.s.	$	13,555	20,677	14,387	7,895	6,699	11,752	6,458	11,876
Pig	tons	68	2,846	11	65	14	3	.....	.....
	$	805	72,023	179	1,000	317	66	.....	.....
	$	11.84	25.30	16.27	15.38	22.64	22.00	.....	.....
Scrap	$	37,498	205,134	191,210	120,493	46,482	26,576	3,797	46,117
All other and hardware	$	81,995	92,588	84,713	209,548	319,217	217,389	99,268	74,970
Junk and oakum	cwt	16,883	21,332	18,477	10,398	13,735	14,629	13,204	25,425
	$	32,287	34,939	35,177	30,846	34,963	32,574	32,408	37,696
	$	1.91	1.64	1.90	2.97	2.55	2.23	2.45	1.48
Leather:									
Sole and upper	$	263,826	408,708	416,902	426,403	271,140	296,186	419,749	257,153
Boots and shoes	prs	195,256	159,676	95,828	116,437	90,872	101,501	.....	.....
	$	193,553	165,147	101,727	117,868	96,815	109,430	70,199	68,534
	$	.99	1.03	1.06	1.01	1.07	1.08	.....	.....
Harness and saddlery	$	2,823	3,314	4,746	2,149	4,346	2,752	2,827	4,774
Other manufactures, of	$	5,149	8,357	4,986	5,918	121,982	110,374	20,605	28,129
Lime	$	4,299	8,047	4,691	7,579	11,112	10,402	11,005	18,638
Liquors, viz.:									
Ale, beer & cider	gals	54,399	53,219	56,802	42,450	18,641	19,305	5,103	4,774
	$	19,500	18,952	20,824	19,088	7,657	7,021	2,086	2,384
	$	.36	.36	.37	.45	.41	.36	.40	.50
Whiskey	gals	21,291	4,181	2,513	7,056	14,515	8,054	10,630	9,138
	$	10,637	3,280	2,598	5,591	12,486	6,668	10,311	9,987
	$	.50	.78	1.03	.79	.86	.83	.97	1.09
Other spirits	gals	83,833	12,629	5,558	5,363	2,366	1,482	406	1,320
	$	69,069	12,212	3,931	3,297	2,722	1,796	775	1,756
	$	.82	.97	.71	.61	1.15	1.21	1.91	1.33
Machinery, n.e.s.	$	54,205	47,193	40,201	77,432	74,366	82,491	86,163	80,455

TABLE No. XIII.—EXPORTS OF THE DOMINION.—*Continued.*

Articles.		1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Musical Instruments, viz.:									
Organs	No	224	293	306	965	459	1,114	2,007	2,139
	$	20,141	28,855	27,612	84,295	40,372	85,475	135,212	146,353
	$	90.00	98.48	90.24	87.35	87.96	76.73	67 37	68.42
Pianos	No	20	31	17	16	24	41	35	46
	$	3,955	7,995	3,480	2,865	6,768	11,215	8,830	13,035
	$	197.70	258.00	204.70	179.06	282.00	273.53	252.28	283.37
All others	$	79	470	133	3,874	1,629	1,399	463	3,366
Oil cake	cwt	67,910	12,155	18,790	16,217	8,701	4,310	12,305	24,401
	$	44,572	21,819	39,474	38,288	20,855	6,947	23,127	50,347
	$	.66	1.80	2.10	2.36	2.40	1.61	1.88	2.06
Rags	$	26,834	49,294	49,044	35,800	30,820	12,799	11,634	5,947
Sewing machines	No	26,796	27,603	22,463	22,563	9,147	8,093	9,418	5,294
	$	218,601	201,545	165,452	150,643	69,933	95,326	69,235	35,627
	$	8.16	7.30	7.37	6.68	7.65	11.78	7.35	6.73
Ships sold to other countries.	No	72	64	61	42	44	43	28	46
	tons	19,318	16,208	16,808	16,161	23,896	17,368	13,177	14,343
	$	529,824	464,327	348,018	402,311	506,538	416,756	246,277	266,363
	*$	27.43	28.65	20.71	24.89	21.20	24.00	18.69	18.57
Soap	lbs	158,001	90,196	115,591	125,203	108,268	156,828	138,307	158,224
	$	6,627	4,498	4,370	5,020	3,957	6,855	5,419	8,502
	cts	4.2	5.0	3.8	4.0	3.7	4.4	3.9	5.4
Starch	lbs	16,715	643,057	880,092	93,679	824,049	2,675,160	1,157,597	914,920
	$	863	31,650	32,691	4,621	25,360	69.097	25,795	22,442
	cts	5.2	4.9	3.7	4.9	3.1	2.6	2.2	2.5
Steel and manufactures of	$	34,673	78,451	143,656	96,266	43,812	30,781	30,323	24,093
Stone and marble, wrought	$	6,515	6,811	13,802	22,790	18,469	18,469	17,235	17,801
Tobaccos, viz.:									
Cigars and cigarettes	lbs	400	13,575	36,288	950	122,942	553	320	2,095
	$	593	4,657	6,842	1,112	25,696	1,067	686	3,101
	$	1.48	.34	.19	1.17	.21	1.93	2.14	1.48
Stems and cuttings	lbs	69,484	205,796	37,201	421,844	301,513	526,880	370,949	256,489
	$	5,394	7,701	1,425	12,750	10,207	14,974	8,079	6,237
	cts	7.8	3.7	3.8	3.0	3.4	2.8	2.2	2.4
All other, n.e.s.	lbs	344,499	189,802	255,313	272,927	228,028	84,484	115,868	107,474
	$	50,851	28,141	36,536	53,289	38,134	14,883	25,957	22,159
	$	.15	.15	.14	.20	.17	.18	.22	.21
Vinegar	gals	317	670	680	1,737	527	82	335	56
	$	86	181	266	498	148	26	83	18
	$	.27	.27	.30	.29	.28	.32	.25	.32
Wood, viz.:									
Household furniture	$	95,988	118,961	100,387	106,854	133,932	131,705	169,115	225,023
Doors, sashes, and blinds	$	20,025	22,742	22,280	39,997	22,147	59,645	46,678	33,070
Other manufactures of	$	184,805	268,035	291,657	354,043	384,796	430,345	470,206	379,498
Woollens	$	35,125	32,687	21,681	25,752	31,296	41,060	55.733	28,283
Other articles	$	236,038	339,129	440,236	410,491	564,309	580,975	481,135	468.298
Total values	$	2,700,281	3,242,617	3,075,095	3,329,598	3,503,220	3,577,535	3,181,501	2,824,137
Miscellaneous:	$	386,999	640,155	622,182	535,935	528,895	560,690	557.374	604,011
Grand totals	$	60,089,578	70,096,191	80,922,579	90,106,614	84,285,707	77,132,079	76,183,518	74,975,506

* Per ton.

INTERNATIONAL COMMERCE: CANADA AND UNITED STATES.

TABLE No. XIV.—Showing by quantity and value the exports of merchandise the growth or produce of Canada to the United States, and of merchandise the growth or produce of the United States to Canada, for the fiscal years 1885 and 1886.

Compiled from the Trade Tables of Canada and the United States respectively.

Articles.	Canada's Exports to United States.				United States' Exports to Canada.			
	1885.		1886.		1885.		1886.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
The Mine:		$		$		$		$
Coal—								
Anthracite ...tons	355,696	1,178,799	362,553	1,127,677	554,576	2,458,795	642,531	2,564,340
Bituminous... "					511,582	1,422,712	298,683	751,895
Gold bearing quartz, dust, nuggets, etc.	.....	999,007	.....	1,210,414	.....	.....	.....	.....
Gypsum, crude..tons	116,415	120,046	106,737	112,271	.....	.....	.....	.....
Oils, mineral...gals.	953,996	27,136	251,450	27,742	3,645,549	416,914	3,702,738	479,894
Ore, antimony..tons	3	1,500	2	3,000	.....	.....	.....	.....
" copper .... "	1,232	245,290	5,224	291,397	.....	.....	21	4,686
" iron ..... "	54,367	132,074	7,542	23,039	2,834	7,965	561	1,122
" manganese. "	302	14,974	281	13,001	.....	.....	.....	.....
" silver..... "	31	7,539	81	25,134	.....	.....	.....	.....
Phosphates .... "	745	8,980	532	6,817	.....	.....	.....	.....
Plumbago.....cwt.	.....	.....	3,645	1,481	.....	.....	.....	.....
Salt .....bush.	107,523	12,326	384,283	26,714	5,672	2,809	10,046	4,873
Sand and gravel.tons	90,015	23,590	102,795	23,195	.....	.....	.....	.....
Slate ..... "	353	4,210	260	4,256	.....	1,000	.....	2,400
Stone and marble— unwrought ...tons	15,724	52,155	14,850	59,888	.....	172,440	.....	139,314
Other articles	.....	70,892	.....	159,670	.....	.....	.....	.....
Total values..	.....	2,898,518	.....	3,115,696	.....	4,482,635	.....	3,948,524
The Fisheries:								
Codfish—including haddock, ling and pollock, fresh..lbs.	452,000	3,746	276,469	1,786	.....	.....	.....	.....
dry salted ....cwt.	195,666	641,611	153,271	406,392	2,865	8,907	571	3,423
wet salted.... "	32,729	92,846	12,715	33,306	.....	.....	.....	.....
pickled..... "	221	408	25,064	71,062	.....	.....	.....	.....
tongues and sounds ....bbls.	347	7,106	1,304	10,393	.....	.....	.....	.....
Mackerel, fresh lbs.	529,292	8,877	324,424	13,276	.....	.....	.....	.....
" canned "	.....	.....	153,991	8,901	.....	.....	.....	.....
" pickled bbls.	84,497	625,902	60,867	372,709	940	2,962	75	475
Halibut, fresh.. lbs.	230,866	7,358	233,140	13,266	.....	.....	.....	.....
Herring, fresh.. lbs.	1,556,105	16,450	3,446,036	29,724	.....	.....	.....	.....
" pickled.bbls.	98,390	290,534	28,299	78,172	.....	.....	.....	.....
" smoked .lbs.	9,717,162	133,109	5,133,261	67,225	.....	.....	.....	.....
Sea-fish, n. e. s. fresh .....lbs.	.....	30,300	1,756,564	44,605	.....	.....	.....	.....
pickled .....bbls.	1,045	4,236	1,531	6,149	.....	.....	.....	.....
preserved.....lbs.	.....	.....	6,150	145	.....	.....	.....	.....
Oysters	.....	253	.....	792	.....	112,882	.....	105,328
Lobsters, fresh.bbls.	20,687	52,469	32,077	81,761	.....	.....	.....	.....
" canned. lbs.	6,198,975	712,870	4,644,515	499,779	.....	.....	.....	.....
Other shell-fish	.....	.....	.....	5	.....	32,582	.....	25,127
Salmon, fresh ..lbs.	2,133,154	223,249	2,157,700	219,358				
" smoked . "	8,391	1,220	4,853	979	.....	25,217	.....	24,435
" canned.. "	276,060	28,357	148,875	15,351				
" pickled.bbls.	3,698	42,015	3,422	32,225				
Fish, n. e. s.....lbs.	.....	447,081	.....	426,349	897,598	26,205	853,386	26,205
" pickled.....bbls.	2,692	10,804	1,576	9,935	438	1,539	528	3,984
" cured .....lbs.	.....	.....	.....	.....	529,049	29,159	426,977	24,348

TABLE No. XIV.—INTERNATIONAL COMMERCE.—*Continued.*

Articles.	Canada's Export to United States.				United States' Exports to Canada.			
	1885.		1886.		1885.		1886.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$		$
The Fisheries.—*Con.*								
Fish oil, cod....gals.	95,656	41,168	12,813	3,933	.....	.....	.....	.....
" other.. "	70,032	27,174	46,420	13,332	17,736	5,482	11,425	9,504
Furs and skins of marine animals...	.....	91,211	.....	79,215	.....	.....	.....	.....
Other articles.....	.....	20,377	.....	17,423	.....	.....	.....	.....
Total values..	.....	3,560,731	.....	2,587,548	.....	244,935	.....	222,824
The Forest:								
Ashes, pot and pearl .....bbls.	299	7,629	238	5,134	.....	.....	.....	.....
ashes, leached	.....	16,582	.....	16,072	.....	.....	.....	.....
" all other	.....	7,179	.....	14,766	.....	.....	.....	.....
Bark for tanning .....cords	74,794	364,015	49,014	221,815	.....	1,418	.....	297
Basswood, butternut and hickory..M ft.	939	11,610	140	1,050	.....	.....	.....	.....
Firewood ....cords.	145,106	316,299	155,087	313,214	2,106	6,648	2,677	8,342
Hop, hoop, telegraph & other poles.cords	.....	84,789	.....	106,665	.....	.....	.....	45
Knees and futtocks .....pieces	7,507	7,610	5,800	5,446	.....	.....	.....	.....
Lathwood .....cords	245	260	.....	.....	.....	.....	.....	.....
Logs, hemlock..M ft.	3,629	14,752	6,881	28,076				
" oak ..... "	1,137	15,548	1,163	13,660				
" pine .... "	380	2,300	2,869	24,452	.....	* 442,957	.....	*101,498
" spruce... "	11,165	49,449	17,541	81,874				
" all other. "	31,479	143,483	37,581	161,385				
Battens ..... "	.....	.....	.....	6,571				
Deals, pine ..St. hd.	474	22,698	4	288				
" spruce & other "	483	11,765	2,147	54,804	.....	.....	.....	.....
Deal ends .... "	96	1,520	25	399	.....	.....	.....	.....
Laths, palings and pickets .....M.	136,765	220,507	141,220	213,881	1,594	1,759	630	919
Planks, boards and joists.....M ft.	562,542	6,956,248	514,985	5,853,021	22,371	374,732	25,700	539,675
Scantling..... "	5,911	42,765	8,709	66,487				
Staves & headings.M.	66,550	312,890	81,087	329,076	.....	76,046	.....	39,521
Lumber, all other.	.....	184,542	.....	286,869	.....	44,527	.....	20,482
Masts & spars..pieces	10,908	5,746	21,201	12,063	.....	.....	.....	.....
Shingles .....M.	52,287	133,298	55,197	116,182	9,532	15,700	10,819	14,299
Shingle bolts ..cords	756	2,906	271	936	.....	.....	.....	.....
Sleepers and railroad ties .....pieces	712,935	142,049	1,337,292	261,405	.....	.....	.....	.....
Stave bolts ....cords	39,616	97,863	50,333	116,900	.....	.....	.....	.....
Shooks, box.....M.	25,147	9,444	672,015	79,064	.....	.....	.....	44
Timber, square—								
birch .....tons	129	1,373	106	828				
maple..... "	42	460	.....	.....				
oak..... "	822	4,607	11	205	.....	597,493	.....	516,296
pine, red .... "	.....	.....	24	271				
" white . "	3,188	19,108	270	2,226				
all other ..... "	583	3,215	319	1,916				
Other articles.....	.....	141,227	.....	148,405	.....	.....	.....	.....
Total values..	.....	9,355,736	.....	8,545,406	.....	1,561,280	.....	1,241,418

* Logs and other timber, n. e. s.

TABLE No. XIV.—INTERNATIONAL COMMERCE.—*Continued.*

Articles.	Canada's Exports to United States.				United States' Exports to Canada.			
	1885.		1886.		1885.		1886.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$		$
Animals and their Produce:								
Horses.....No.	11,681	1,524,023	16,113	2,104,355	1,355	235,328	688	105,235
Horned cattle ..“	67,758	1,411,642	25,338	633,094	1,250	47,388	441	18,749
Swine .....No.	1,309	5,319	2,695	6,401	50,856	539,146	66,858	617,152
Sheep .....“	274,962	773,491	313,201	829,884	21,066	56,752	25,310	54,462
Poultry and other animals	.....	170,268	.....	121,248	.....	12,128	.....	12,432
Bones .....cwt.	59,203	53,345	140,889	94,235	.....	1,170	.....	1,790
Butter .....lbs.	88,081	16,795	111,388	17,545	2,218,228	356,920	2,132,424	325,467
Imitation butter. “	.....	.....	.....	.....	4,512	654	38,564	4,535
Cheese..... “	628,168	68,978	174,674	15,478	9,559,315	874,141	8,370,117	655,072
Eggs .....doz.	11,512,279	1,826,729	12,708,883	1,722,579	189,050	39,074	208,079	36,220
Furs, dressed... “	.....	2,956	.....	10,205	.....	98,853	.....	54,733
“ undressed. “	.....	185,619	.....	296,090	.....	.....	.....	.....
Grease & scraps..lbs.	41,478	1,299	30,938	724	.....	95,928	.....	141,591
Glue ..... “	.....	.....	.....	.....	72,067	11,982	121,245	17,862
Hides, horns, etc. “	.....	459,435	.....	465,370	.....	354,641	.....	367,846
Honey ..... “	1,935	195	1,568	150	.....	1,698	.....	1,634
Lard ..... “	40	5	40	5	7,239,796	567,329	7,855,391	495,460
Lard oil .....gals.	.....	.....	.....	.....	65,713	39,011	23,432	10,909
Meats—								
Bacon .....lbs.	8,820	461	368	37	21,867,062	2,227,561	3,952,486	283,535
Beef ..... “	109,013	8,834	67,592	4,802	13,556,531	1,146,082	27,175,248	1,764,377
Hams ..... “	44,593	5,102	1,276	139	2,417,110	279,984	3,238,898	312,122
Mutton ..... “	211,048	12,667	343,466	18,459	169,862	10,104	141,505	6,745
Pork ..... “	1,441	117	5,642	382	19,304,911	1,443,404	27,025,728	1,556,495
Tongues ..... “	1,704	116	.....	.....	.....	.....	.....	.....
All other..... “	18,862	1,932	469,298	53,005	.....	.....	.....	.....
Sheep pelts .....No.	69,820	18,493	134,691	28,901	.....	.....	.....	.....
Tallow ..... lbs.	.....	.....	6,700	88	212,587	13,311	117,203	4,652
Wool ..... “	911,796	186,925	1,316,228	271,424	52,316	11,365	2,041,246	465,719
Other articles	.....	54,816	.....	48,189	.....	51,725	.....	28,312
Total values ..	.....	6,789,562	.....	6,742,789	.....	8,515,679	.....	7,343,106
Agricultural Products:								
Bran .....cwts.	23,089	10,646	89,108	39,775	.....	.....	.....	.....
Cotton.....lbs.	.....	.....	.....	.....	13,198,837	1,400,968	18,712,718	1,882,273
Flax .....cwts.	7,060	59,904	7,286	49,301	.....	.....	.....	.....
Fruits—								
Apples..... bbls.	25,320	51,609	41,407	55,302	13,392	26,163	13,898	28,744
All other green ...	.....	27,666	.....	22,064	.....	271,472	.....	269,251
Dried .....lbs.	3,116	281	2,618	152	.....	18,030	.....	.....
Grain & products of								
Barley .....bush.	9,028,314	5,477,441	8,528,287	5,708,130	37,073	18,442	17,223	11,352
Indian corn . “	20	20	22	12	3,478,193	1,787,486	5,461,389	2,308,135
Oats ..... “	94,971	34,515	240,159	75,817	621,993	187,333	239,302	79,231
Pease ..... “	369,166	300,669	506,704	377,003	5,364	8,219	7,064	7,169
Beans ..... “	192,512	184,917	155,092	154,739	.....	.....	.....	.....
Rye ..... “	249,140	151,379	164,324	94,158	17,024	11,019	.....	.....
Wheat ..... “	345,410	268,718	309,772	256,767	3,164,269	2,749,115	2,507,195	2,069,000
Other grain . “	54,273	32,549	59,130	25,639	.....	.....	.....	.....
Wheat flour..bbls.	2,736	9,676	17,070	79,230	646,380	3,126,596	383,092	1,688,356
Oatmeal ..... “	1,096	2,891	4,398	15,680	17,740	82,778	34,439	139,357
Corn meal ... “	21	79	6	28	103,511	290,033	117,896	310,575
Other meal .. “	485	1,218	415	857	70	135	44	170
Hay.....tons	127,820	1,181,616	85,490	897,806	716	7,489	423	3,646
Hops .....lbs.	1,000	389	7,675	480	68,789	13,289	126,558	11,647
Malt .....bush.	374,961	280,137	284,443	222,187	.....	.....	.....	.....
Rice .....lbs.	25,200	504	.....	.....	12,619	768	2,000	109
Broom corn	.....	.....	.....	.....	.....	95,580	.....	83,091

TABLE No. XIV.—INTERNATIONAL COMMERCE.—*Continued.*

Articles.	Canada's Exports to United States.				United States' Exports to Canada.			
	1885.		1886.		1885.		1886.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$		$
Agricultural Products.—*Con.*								
Vegetable oils						21,339		16,431
Maple sugar.....lbs.	10,109	868	137,755	9,741				
Potatoes ... ..bush.	377,885	108,797	1,848,462	374,122	43,193	18,163	43,872	16,754
Other seeds.....lbs.		46,187		6,870	1,610,423	201,244	4,081,171	346,888
Straw .....tons.	3,014	13,632	2,586	13,395				
Other vegetables..		61,624		49,828		75,197		87,404
Tobacco .....lbs.	47,001	2,244	75,430	3,521	5,801,562	1,194,873	7,808,929	1,070,054
Other articles.		85,194		224,063		94,091		170,883
Total values ..		8,395,370		8,756,667		11,699,822		10,591,520
Manufactures :								
Agricultural implements		9,451		5,434		126,852		121,492
Books, pamphlets, maps, etc		23,285		16,001		141,224		119,610
Bread, biscuit, etc ..						22,702		19,651
Brick and tile						24,632		36,715
Candles, etc.....lbs.	200	47	397	65	95,806	11,201	78,886	8,337
Carriages, cars, etc .....No.	209	10,666	274	12,130		177,415		339,863
Clothing and wearing apparel		9,016		7,933				
Cordage, rope, etc ..		16,032		2,238		111,063		123,030
Cottons		2,080		7,860		602,734		650,400
Earthenware & china						66,045		76,455
Extract of hemlock bark .....bbls.	2,977	24,118	2,742	20,267				
Fertilizers						13,615		7,872
Furs		3,689		3,109				
Glass and glassware.		789		1,631		252,418		257,809
Grindstones		30,754		20,602				
Gypsum, ground....		22,102		18,485				
Hair mfrs						8,752		10,656
Hats and caps		123		71				
India rubber		470		2,362		145,352		139,066
Ink						16,982		11,929
Iron and steel, manufactures of—								
Stoves .....No.	28	462	38	806		40,421		13,813
Castings		5,115		5,005		131,995		91,977
Machinery, other		24,237		25,187		476,335		432,413
Sewing m'chns.No.	803	6,810	412	4,714		127,915		108,245
Scrap iron		2,472		46,117				
All other iron and hardware		82,962		42,639		1,281,926		1,164,885
Manufactures of—								
Brass						34,927		44,506
Copper.						35,077		27,080
Lead.						14,334		13,096
Tin						25,258		38,893
Zinc						2,156		11,439
Junk & oakum.cwts.	12,926	30,995	25,416	37,580	2,226	12,002	9,843	5,170
Leather, sole & upper		223		858		14,772		49,498
Boots and shoes, pairs		800		4,207	28,158	58,225	29,028	49,471
Harness and saddlery		1,851		3,464		43,230		49,339
Other leather mfrs..		2,348		10,954		84,409		90,942
Lime and cement ...		7,965		18,552		24,104		25,047

TABLE No. XIV.—INTERNATIONAL COMMERCE. *Continued.*

Articles.	Canada's Exports to United States.				United States' Exports to Canada.			
	1885.		1886.		1885.		1886.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$		$
Manufactures.—*Con.*								
Ale and beer ...gals.	716	258	1,577	636	.....	36,950	.....	42,222
Whiskey ..... "	5,052	6,074	2,357	4,928	35,499	43,046	12,981	11,414
Wine..... "	331	610	78	136	.....	7,899	.....	10,857
Other spirits... "	76	161	1,010	1,452	241,133	44,253	27,971	15,608
Organs ..... No.	27	2,640	29	2,241	400	45,435	255	24,747
Pianos ..... "	27	7,180	43	11,785	576	136,036	536	147,987
Other musical instruments	.....	463	.....	3,286	.....	4,539	.....	11,355
Oil cake .....cwt.	3,839	7,890	21,957	45,158	21,012	31,030	4,301	7,663
Rags ..... lbs.	.....	11,384	.....	5,347	1,903,610	28,696	1,588,740	23,122
Ships ..... tons.	81	100	397	2,350	1,369	40,145	126	1,390
Soap..... lbs.	2,120	106	7,030	236	254,461	30,097	454,106	36,061
Starch ..... "	482,022	10,650	44,800	1,100	192,110	9,079	72,687	4,004
Stone and marble..	.....	16,956	.....	15,461	.....	42,655	.....	86,919
Silk	.....	.....	.....	.....	.....	22,773	.....	11,562
Spices	.....	.....	.....	.....	.....	11,382	.....	7,657
Straw mfrs.....	.....	.....	.....	.....	.....	5,620	.....	6,731
Trunks.....	.....	.....	.....	.....	.....	1,115	.....	8,366
Varnish .....gals.	.....	.....	.....	.....	6,120	8,672	9,476	11,868
Sugar, refined...lbs.	90	9	268	22	1,416,000	91,307	3,007,575	186,238
" glucose or grape .....lbs.	.....	.....	.....	.....	88,642	3,116	74,061	2,078
Molasses and syrup .....gals.	.....	5	.....	.....	14,672	7,535	44,269	17,560
Candy and confectionery	.....	.....	.....	.....	.....	15,730	.....	12,369
Cigars and cigarettes ....M.	.....	.....	1,075	1,179	2,566	19,989	3,994	15,015
Other tobacco ..lbs.	1,584	552	1,730	603	.....	59,392	.....	46,639
Vinegar .....gals.	.....	.....	5	2	3,314	658	5,341	1,027
Household furniture.	.....	147,416	.....	205,437	.....	494,535	.....	409,948
Doors, sash & blinds.	.....	478	.....	1,913	.....	4,355	.....	16,215
Pails, tubs, etc.....	.....	2,568	.....	1,829	.....	26,849	.....	27,643
Other woodenware..	.....	221,734	.....	208,027	.....	299,088	.....	244,952
Woollens.....	.....	2,849	.....	5,739	.....	296,995	.....	289,044
Chemicals and medicines	.....	.....	.....	.....	.....	288,240	.....	271,303
Clocks and watches.	.....	.....	.....	.....	.....	50,795	.....	28,576
Coffee, cocoa, etc ...	.....	.....	.....	.....	.....	63,979	.....	18,061
Gunpowder and explosives ..... lbs.	.....	.....	.....	.....	371,474	112,693	47,520	63,535
Brooms	.....	.....	.....	.....	.....	23,436	.....	32,074
Fancy articles	.....	.....	.....	.....	.....	109,062	.....	95,633
Jewelry	.....	.....	.....	.....	.....	100,472	.....	88,834
Naval stores.....	.....	.....	.....	.....	.....	50,796	.....	57,866
Paints and colors ..	.....	.....	.....	.....	.....	57,769	.....	52,404
Paper and mfrs. of..	.....	.....	.....	.....	.....	166,115	.....	153,098
Turpentine, spirits ..... gals.	.....	.....	.....	.....	124,933	39,337	93,573	34,848
Stationery.....	.....	.....	.....	.....	.....	39,243	.....	27,548
Other articles	.....	374,552	.....	366,697	.....	457,048	.....	437,920
Total values..	.....	1,133,497	.....	1,203,835	.....	7,556,029	.....	7,238,660
Miscellaneous	.....	485,179	.....	551,351	.....	51,874	.....	58,233
Grand totals.....	.....	32,618,593	.....	31,503,292	.....	34,112,254	.....	30,644,285

* Pounds.

INTERNATIONAL COMMERCE: CANADA AND UNITED STATES

TABLE No. XV.—Showing by classes of products Canada's total imports from all countries, and her imports from the United States for the fiscal year ending June 30, 1886, together with the imports of the United States from Canada for the same period.

Compiled from the Canadian and United States Trade returns.

Articles.	Canada's Total Imports.		Canada's Imports from the United States.		United States' Imports from Canada.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$
The Mine:						
Coal ..... tons.	1,974,462	6,696,356	1,875,086	6,520,050	312,498	1,014,116
Gypsum, crude ..... "	1,870	2,429	1,870	2,429	111,891	115,003
Oils, mineral ..... gals.	4,676,607	614,504	4,670,144	610,424	370,302	15,204
Ore—copper ..... tons.	.....	.....	.....	.....	1,660	332,240
Iron ..... "	.....	.....	.....	.....	8,104	25,731
Phosphates ..... "	.....	.....	.....	.....	676	6,740
Plumbago ..... "	.....	5,522	.....	4,338	.....	2,405
Salt ..... bush.	3,851,343	305,157	126,374	14,348	578,793	53 317
Sand and gravel ..... tons.	14,856	24,141	13,226	22,692	.....	.....
Stone, unwrought ..... "	9,095	51,118	9,060	50,857	.....	.....
Marble " ..... "	.....	94,598	.....	78,575	.....	.....
Other articles	.....	332,413	.....	86,033	.....	3,686
Total values	.....	8,126,238	.....	7,389,746	.....	1,568,442
The Fisheries:						
Cod—including haddock, ling and pollock, fresh ..... lbs.	1,806,656	49,081	1,806,096	49,047	11,826,134	263,357
" salted ..... "	2,780,600	77,867	575,000	28,973		
Mackerel, fresh ..... "	80,236	4,619	79,214	4,539	.....	.....
" pickled ..... bbls.	.....	741	.....	579	50,840	307,529
Halibut ..... lbs.	91,325	3,045	72,125	2,679	.....	.....
Herring, fresh	.....	5,780	.....	434	.....	.....
" pickled ..... bbls.	.....	203,223	.....	413	38,439	117,195
" smoked ..... lbs.	51,067	2,271	46,199	2,011	4,626,098	75,723
Other sea-fish, fresh ..... "	22,488	1,245	22,488	1,245	.....	.....
" pickled	.....	630	.....	320	.....	.....
Oysters	.....	272,626	.....	272,613	.....	.....
Lobsters, fresh	.....	2,577	.....	2,551	.....	.....
" canned	.....	574	.....	574	.....	338,982
Salmon, fresh ..... lbs.	5,194	367	4,194	267	1,422,620	144,779
" smoked ..... "	26,681	1,211	18,788	902		
" canned	.....	32,413	.....	1,227	.....	557,367
All other fish, fresh ..... lbs.	103,812	2,989	101,395	2,751		
" pickled ..... "	26,344	1,166	26,344	1,166	.....	218.024
" cured	.....	96,083	.....	42.097		
Fish oil ..... gals.	183,169	88,593	27,222	10,717	65,046	18,024
Furs and skins	.....	5,937	.....	151	.....	.....
Other articles	.....	5,076	.....	4,058	.....	.....
Total values	.....	858,114	.....	429,314	.....	2,040,980
The Forest:						
Ashes	.....	5,249	.....	5,120	.....	.....
Bark for tanning ..... cords.	.....	2,229	.....	2,229	55,930	259,479
Firewood ..... "	1,373	5,577	1,373	5,577	.....	.....
Logs	.....	493,236	.....	493,196	.....	.....
Planks, boards, deals, etc ..... m. ft.	.....	.....	.....	.....	547,424	6,381,571
Shingles ..... "	12,519	15,188	12,497	15,155	79,150	171,597
Timber, square	.....	.....	.....	.....	.....	2,272
All other lumber and timber	.....	402,521	.....	401,504	.....	757,208
Other articles	.....	83,286	.....	73,408	.....	1,416,541
Total values	.....	1,007,286	.....	996,189	.....	8,988,668

TABLE No. XV.—INTERNATIONAL COMMERCE.—*Continued.*

Articles.		Canada's Total Imports.		Canada's Imports from the United States.		United States' Imports from Canada.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			$		$		$
ANIMALS AND THEIR PRODUCE:							
Horses	No.	3,345	480,227	3,017	264,684	21,142	2,949,775
Horned cattle	"	4,159	232,019	3,826	186,997	35,746	788,062
Sheep	"	33,256	73,977	32,984	68,850	365,242	967,210
Swine	"	16,695	125,830	16,568	123,081		136,644
Poultry and other animals			20,169		19,341		
Bones	cwt.	375	612	368	554		
Butter	lbs.	325,201	65,274	323,590	64,830	176,038	27,748
Cheese	"	89,696	14,690	60,569	9,776	3,541	383
Lard	"	3,061,744	192,737	3,061,537	192,706		
Furs			892,610		272,455		696,343
Hides, skins, horns and hoofs			1,742,750		1,668,035		495,970
Honey	lbs.	17,839	1,992	17,128	1,905		
Eggs	doz.	268,722	44,638	264,167	44,261	14,465,764	1,893,672
Meats:							
Bacon and hams	lbs.	3,564,495	285,422	3,557,744	284,178		
Beef	"	1,413,957	70,535	1,406,869	69,893		
Mutton	"	139,119	7,136	139,119	7,136		
Pork	"	14,308,040	646,748	14,283,340	644,818		
Poultry and game			15,283		12,642		
All other			89,656		80,967		133,705
Sheep pelts			8,696		8,228		
Tallow	lbs.	150,312	8,559	129,071	6,896		
Wool	"	11,983,111	1,796,850	4,166,805	592,681	1,627,048	337,188
Oils	gals.	39,045	21,661	35,911	18,652	3,476	1,382
Grease and scraps	lbs.	3,360,129	145,517	3,360,129	145,517		
Silk			154,585		153,216		822
Bristles	lbs.	66,967	63,957	56,906	51,191	50	94
Hair	"	203,600	36,674	189,176	33,739		17,113
Other articles			124,639		96,531		969
Total values			7,363,443		5,113,260		8,447,080
AGRICULTURAL PRODUCTS:							
Bran			41,376		41,376		
Cotton	lbs.	31,506,045	3,008,659	30,831,706	2,971,063	2,350	306
Hemp, flax, jute, etc	cwt.	115,310	546,471	59,079	200,548	25,100	215,871
Fruit:							
Green			716,208		536,317		
Dried			690,748		100,049		141,413
Nuts			193,137		103,986		
Fruit trees			42,129		42,069		
Other trees and plants			48,478		38,651		
Coffee	lbs.	3,940,745	466,585	1,015,869	113,071	249,104	23,272
Tea	"	22,582,276	4,229,493	2,042,235	347,759	138,157	21,072
Tobacco	"	13,771,608	1,616,349	13,740,466	1,604,613	431,419	189,277
Oils	gals.	1,252,720	548,734	185,463	94,314	667	320
India rubber, crude	lbs.	627,203	348,254	627,124	348,219		
Grain and products of							
Barley	bush.	8,212	5,642	8,134	5,497	10,194,107	7,175,397
Indian corn	"	1,825,383	835,839	1,825,383	835,839	204	95
Oats	"	98,382	32,970	98,357	32,939	90,124	30,441
Beans	"	7,157	9,129	6,710	8,632	608,444	524,978
Pease	"	4,300	5,622	4,024	5,690		
Rye	"	18	15	18	15	173,787	128,175
Wheat	"	66,084	55,864	66,061	55,770	379,569	328,500
Other grain	"	23	21	23	21		
Wheat flour	bbls.	201,327	787,982	199,375	777,848	1,694	5,912
Oatmeal	"	1,393	8,814	920	5,909	167	786
Cornmeal	"	123,780	298,043	123,779	298,038		
Other meal	"	298	1,645	298	1,645		

TABLE No. XV.—INTERNATIONAL COMMERCE.—*Continued.*

Articles.	Canada's Total Imports.		Canada's Imports from the United States.		United States' Imports from Canada.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$
Agricultural Products.—*Con.*						
Hay ..... tons.	814	6,697	814	6,697	91,951	1,034,496
Hops ..... lbs.	290,009	47,481	164,369	23,559	546	124
Malt ..... bush.	20,387	18,094	19,914	17,456	319,005	233,751
Rice ..... lbs.	18,757,020	259,077	597,746	15,774	271,698	5,584
Seeds, n. e. s.	.....	397,360	.....	324,723	.....	14,971
Potatoes ..... bush.	58,170	26,620	58,157	26,609	1,441,504	369,965
Tomatoes ..... "	10,666	17,567	10,627	17,499	.....	.....
Other vegetables	.....	130,236	.....	106,504	.....	57,139
Other breadstuffs —						
Arrowroot and tapioca .... lbs.	794,177	26,171	131,687	5,038	.....	.....
Maccaroni, etc ..... "	206,999	9,778	53,192	3,216	.....	.....
All other	.....	35,715	.....	28,212	.....	113,751
Broom corn	.....	122,487	.....	121,709	.....	.....
Spices ..... lbs.	1,504,840	191,435	613,331	65,442	.....	373
Other articles	.....	52,179	.....	42,168	.....	.....
Total values	.....	15,810,994	.....	9,373,884	.....	10,615,963
Manufactures :						
Agricultural implements	.....	150,458	.....	133,014	.....	.....
Baking powder	.....	121,731	.....	121,664	.....	.....
Bells	.....	39,772	.....	29,660	.....	.....
Belts and trusses	.....	26,399	.....	20,006	.....	.....
Blacking and harness dressing	.....	47,220	.....	36,067	.....	.....
Books, pamphlets, maps, etc.	.....	1,284,173	.....	790,964	.....	46,440
Book-binders' tools	.....	39,041	.....	12,450	.....	.....
Boot and stay laces	.....	46,430	.....	12,548	.....	.....
Bolting cloth	.....	19,823	.....	16,866	.....	.....
Braces and suspenders	.....	92,360	.....	32,195	.....	.....
Bread and biscuit ..... lbs.	530,921	24,800	487,638	22,793	.....	.....
Brick and tile	.....	133,736	.....	78,861	.....	.....
Brooms and brushes	.....	94,905	.....	39,972	.....	238
Buttons	.....	305,863	.....	94,607	.....	49,168
Candles ..... lbs.	322,927	40,891	110,315	14,201	.....	.....
Candy and confectionery .... "	649,084	94,621	306,966	50,633	.....	306
Carriages, cars, etc	.....	393,203	.....	365,754	.....	.....
Cement	.....	128,272	.....	15,441	.....	62
Clocks and parts of	.....	124,699	.....	106,009	.....	435
Coal tar, etc ..... bbls.	20,162	27,912	19,353	26,896	.....	.....
Cocoa, chocolate, etc ..... lbs.	501,666	95,674	250,497	44,324	.....	.....
Collars, cuffs, etc	.....	123,739	.....	80,433	.....	.....
Combs	.....	74,719	.....	23,219	.....	.....
Cordage, rope, etc ..... lbs.	937,089	92,068	735,571	73,056	.....	.....
Corks	.....	57,253	.....	25,054	.....	.....
Cottons	.....	5,781,848	.....	1,038,528	.....	165,164
Drugs, dyes, chemicals, etc	.....	2,424,088	.....	1,102,486	.....	114,059
Earthenware and china	.....	599,269	.....	41,415	.....	8,305
Electric & galvanic batteries	.....	15,768	.....	14,517	.....	.....
Electric light apparatus	.....	35,508	.....	35,030	.....	.....
Fancy goods	.....	1,390,659	.....	186,190	.....	5,285
Fertilizers	.....	1,849	.....	1,849	.....	82,218
Fishery supplies	.....	287,073	.....	152,570	.....	.....
Flax, hemp, and jute man'fs.	.....	1,408,903	.....	59,899	.....	4,016
Furs	.....	148,634	.....	21,956	.....	10,309
Glass and glassware	.....	1,144,220	.....	438,810	.....	3,338
Grindstones ..... No.	964	12,803	926	12,292	.....	.....
Gunpowder & other explosives	.....	139,686	.....	76,636	.....	.....

TABLE No. XV.—INTERNATIONAL COMMERCE.—*Continued.*

Articles.		Canada's Total Imports.		Canada's Imports from the United States.		United States' Imports from Canada.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			$		$		$
Manufactures.—*Continued.*							
Hair goods			42,004		22,963		27
Hats and caps			1,163,190		594,541		4,524
India rubber goods			723,406		498,459		2,476
Ink			78,108		55,026		
Jewelry			466,191		313,843		2,629
Junk and oakum	cwt.	15,239	57,320	4,326	18,221		
Liquors—							
Ale and beer	gals.	346,153	174,688	125,648	30,458	7,593	5,296
Brandy	"	216,790	438,539	392	1,301	7,021	14,660
Gin	"	408,247	174,799	728	638		
Whiskey	"	157,855	177,405	8,154	14,589		
Wine			509,538		22,530		16,339
Other spirits			116,304		31,387		15,956
Lime	bbls.	11,021	9,347	11,021	9,347		
Leather			954,967		514,201		34,081
Leather, manufactures of—							
Boots and shoes	prs.	280,292	218,639	171,372	164,960		
Harness and saddlery			31,464		27,885		
All other			497,358		136,222		11,751
Manufactures of—							
Iron and steel, viz.:							
Stoves	No.	1,976	22,991	1,923	22,522		
Castings			250,831		220,759		
Machinery			1,020,374		888,095		31,617
Sewing machines			147,254		145,393		
All other and hardware			8,691,760		2,532,098		163,439
Brass			412,662		297,636		1,368
Copper			226,389		132,611		308
Gold and silver			280,343		158,665		
Lead			175,571		14,800		105
Tin			1,103,918		316,313		7
Zinc			92,944		14,476		1,157
Other metals			447,906		257,683		13,816
Musical instruments—							
Organs, and parts of			34,592		34,189		
Pianos, and parts of			304,573		275,270		17,860
All other			77,962		28,501		
Mustard	lbs.	464,816	64,192	164,684	12,597		
Oils			65,345		46,090		566
Oil cake	cwt.	11,312	14,046	11,312	14,046		
Oil cloth			262,251		116,761		
Optical instruments			60,844		29,040		
Paintings, statuary, etc.			225,827		172,739		4,768
Paints and colors			567,451		159,711		1,051
Paper			1,088,145		648,523		6,828
Pencils			60,153		38,791		
Perfumery			35,808		24,491		
Pickles			124,426		20,221		134
Printing presses	No.	210	89,386	192	79,878		
Rags			224,922		164,363		14,593
Resin	bbls.	19,829	91,694	19,796	91,559		
Silk, manufactures of			2,356,697		119,938		3,122
Ships, and parts of			53,636		53,636		
Soap			142,199		104,821		663
Spices	lbs.	240,192	17,301	189,523	10,564		16
Starch	"	733,760	40,240	360,386	19,005		
Straw			13,224		7,875		

TABLE No. XV.—INTERNATIONAL COMMERCE.—*Continued.*

Articles.	Canada's Total Imports.		Canada's Imports from the United States.		United States' Imports from Canada.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		$		$		$
MANUFACTURES.—*Continued.*						
Stone, wrought		41,984		22,303		92,756
Slate "		27,852		25,621		
Marble "		23,154		20,191		111
Sugar		4,337,729		278,146		98,900
Syrup and molasses		875,409		112,033		52,760
Tobacco pipes		113,274		11,269		
Tobacco, manufactures of—						
Cigars and cigarettes lbs.	157,305	331,730	29,665	50,856	3,483	5,460
Snuff "	11,147	2,505	10,821	2,404		
All other "	175,859	67,027	151,652	61,165		23,390
Turpentine, spirits of gals.	351,021	145,242	350,995	145,225		
Trunks, etc		80,441		49,634		
Twines, etc lbs.	770,960	96,495	505,589	68,070		
Varnish gals.	47,924	98,493	41,282	77,459		
Vinegar "	42,942	9,917	7,268	1,469		
Watches, and parts of		384,222		278,636		9,626
Wax		24,672		15,467		
Whips		56,557		50,183		
Willow and rattanware		25,163		15,522		
Wood, manufactures of—						
Household furniture		185,400		164,447		53,420
Pails, tubs, etc		28,656		27,724		
All other		639,828		558,912		93,014
Woollens		9,321,370		162,185		32,946
Other articles		1,373,877		444,563		65,814
Total values		60,082,191		17,822,580		1,386,697
MISCELLANEOUS:						
Settlers' effects		1,336,717		1,041,029		1,577,443
U. S. products returned						1,990,531
Vaccine		9,767		9,710		
Supplies—						
Departmental		465,074		170,788		
Army, Navy and Militia		148,768		19,815		
Ships' stores		119,663		95,922		
Other articles		663,882		356,414		688,232
Total		2,743,871		1,693,678		4,256,206
Grand totals		95,992,137		42,818,651		37,304,036

LOAN COMPANIES AND BUILDING SOCIETIES.

TABLE No. XVI.—Summary of the financial statements of twenty-eight Loan Companies and Building Societies of Ontario, making full annual returns to the Government for the nine years 1877-85.*

SCHEDULE.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Stock subscribed	21,181,881 40	20,276,718 06	19,556,118 06	19,054,121 72	17,407,295 40	15,897,750 00	15,114,032 50	14,383,211 75	13,839,209 00
Liabilities—									
To stockholders	21,422,108 59	21,230,308 97	20,296,818 05	19,545,845 06	18,656,445 70	17,270,999 07	16,181,740 78	15,364,579 43	13,823,661 22
To the public	25,074,395 10	22,428,346 64	20,231,447 26	18,843,462 70	17,336,420 67	15,283,971 79	12,803,967 18	11,574,429 35	9,580,281 63
Total liabilities	46,496,503 69	43,658,655 61	40,528,265 31	38,389,307 76	35,992,866 37	32,554,970 86	28,985,707 96	26,939,008 78	23,403,942 85
Assets—									
Loans secured on real estate	43,208,765 28	40,237,048 09	37,247,052 11	35,421,222 21	33,231,809 61	29,014,307 53	26,502,987 01	25,481,165 39	22,224,603 64
Loans otherwise secured	1,034,751 46	1,222,554 82	1,141,358 05	1,065,691 10	756,123 31	527,761 65	394,936 95	310,687 26	406,693 65
Property—real estate	587,066 14	587,042 35	599,832 80	622,802 02	590,734 98	683,156 61	572,344 51	363,616 81	234,032 11
other	1,659,607 52	1,609,760 64	1,540,022 35	1,279,592 43	1,414,198 47	2,318,386 87	1,524,791 01	783,539 32	538,593 45
Total assets	46,490,190 40	43,656,405 90	40,528,265 31	38,389,307 76	35,992,866 37	32,543,612 66	28,995,059 48	26,939,008 78	23,403,922 85
Amount of dividend declared in year	1,376,714 52	1,369,281 91	1,197,720 19	1,289,338 64	1,208,613 94	1,149,375 50	1,163,989 30	1,096,850 47	981,163 11
Amount loaned	9,502,519 06	8,244,720 27	7,881,994 89	8,302,740 29	10,869,225 92	7,835,406 77	6,174,758 47	7,911,687 96	8,390,724 05
Amount received from borrowers	8,991,415 98	8,204,463 73	8,521,180 07	8,227,844 21	9,165,636 46	7,468,517 50	6,918,702 36	6,771,725 75	5,675,207 63
Amount received from depositors	14,665,490 18	14,605,856 99	14,491,299 02	16,311,137 27	13,837,617 31	11,098,244 28	9,360,558 54	8,548,831 96	7,715,594 32
Amount repaid to depositors	13,795,802 79	13,761,561 18	14,869,141 82	16,038,908 39	13,013,995 07	9,787,913 43	8,711,997 59	7,520,042 49	6,753,390 48
Amount of debentures issued	2,860,857 50	3,073,586 92	2,734,365 86	1,928,758 46	1,142,653 10	1,067,325 64	755,407 36	825,117 17	1,152,319 95
Amount of debentures repaid	1,382,937 81	1,292,039 31	1,025,582 65	637,061 54	605,738 45	259,469 99	106,736 67	19,466 66	2,920 00
Amount borrowed for investment	20,598,902 49	18,065,672 09	16,293,908 12	13,420,396 20	15,086,902 41	12,987,738 01	1,596,102 91	.....	.....
Amount invested and secured by mortgage deeds	42,507,375 77	39,921,214 96	36,118,967 03	32,562,557 50	27,003,604 54	21,504,458 08	3,770,720 70	.....	.....

* For the names of Companies and Societies whose returns are used in compiling this Table, see p. 301.

LOAN COMPANIES AND BUILDING SOCIETES.

TABLE No. XVII.—Summary of financial statements of the Loan Companies and Building Societies of Ontario for the six years 1880-85, compiled from annual returns made to the Dominion Department of Finance.

Schedule.	1885.	1884.	1883.	1882.	1881.	1880.
Number in operation	73	71	71	73	70	67
Number making returns	67	67	67	69	61	59
Capital subscribed .... $	69,499,843 40	67,894,692 71	66,119,614 57	58,742,263 65	49,049,258 72	47,425,924 41
Liabilities to stockholders $	38,417,440 97	37,464,757 06	36,119,909 11	33,000,818 17	29,284,548 20	27,174,463 92
Capital paid up $	29,526,934 72	28,856,266 09	28,028,625 18	25,307,202 84	22,151,246 95	20,932,203 45
Reserve fund $	7,124,348 84	6,736,946 42	6,337,048 36	5,820,108 69	4,987,915 93	4,475,169 55
Other funds $	520,409 75	583,998 68	523,205 34	662,628 23	362,999 59	344,842 39
Miscellaneous $	1,245,747 66	1,287,545 87	1,231,030 23	1,210,878 41	1,782,386 63	1,422,248 53
Liabilities to the public $	50,534,613 38	46,282,399 70	43,303,986 12	40,950,253 00	36,685,990 98	34,864,214 52
Deposits $	14,824,212 25	13,230,822 07	13,161,505 66	13,161,643 05	12,389,605 33	10,747,739 08
Debentures payable in Canada $	4,105,603 43	3,673,382 55	3,591,466 43	2,786,280 20	1,240,406 14	244,659 60
Debentures payable elsewhere $	30,167,567 29	28,246,269 90	25,679,802 96	23,601,458 79	21,812,438 99	22,857,440 22
Interest on deposits $	202,152 93	155,611 02	212,249 42	172,994 75	207,291 89	182,861 79
Interest on debentures $	259,129 26	318,544 91	231,345 37	183,973 59	157,416 53	158,906 35
Other liabilities $	975,948 22	657,769 25	427,616 28	1,043,902 62	878,832 10	672,607 48
Total liabilities. $	88,952,054 35	83,747,156 76	79,423,895 23	73,951,071 17	65,970,539 18	62,038,678 44
Loan assets $	80,005,918 51	74,963,099 91	71,353,700 67	68,052,280 60	60,877,876 65	54,886,634 06
On real estate $	77,191,165 80	72,383,350 29	68,078,540 57	65,087,809 37	58,750,624 91	53,325,333 11
On municipal securities $	146,256 87	114,769 27	94,317 81	115,124 55	88,816 77	200,148 67
On school section securities $	34,830 50	27,200 00	20,560 76	24,610 00	17,620 00	7,550 00
On shareholder's stock $	1,030,605 03	1,170,306 64	1,188,367 11	1,554,779 33	755,691 20	514,469 56
On other securities $	1,603,060 31	1,267,473 71	1,971,914 42	1,269,957 35	1,265,123 77	839,132 72

Property assets	$	8,542,694 63	8,452,351 13	8,201,773 89	7,333,548 63	7,048,058 78	8,397,456 43
Government securities	$	512,373 54	310,185 10	473,387 50	298,387 50	316,838 47	397,257 99
Municipal securities	$	1,440,940 65	1,642,299 50	1,552,721 90	1,417,641 50	1,640,332 16	1,246,575 48
School section securities	$	85,440 36	73,872 21	90,816 51	2,769 87	3,103 66	9,540 08
Real estate	$	3,081,428 78	3,002,696 58	2,828,852 36	3,021,242 16	1,762,792 27	1,708,249 37
Office furnishings	$	31,034 17	34,609 28	32,281 96	36,337 39	34,506 37	32,989 62
Cash	$	2,360,629 32	2,382,052 12	2,281,885 81	1,843,470 52	2,168,888 66	4,298,979 30
Other property	$	1,030,847 81	1,006,676 64	941,797 80	913,699 69	1,121,597 19	873,864 59
Total assets	$	88,548,613 14	83,415,491 34	79,555,474 56	75,585,829 23	67,925,935 43	63,484,090 49
Dividend declared in year	$	2,175,966 20	2,138,899 75	1,968,486 81	1,975,512 38	2,027,644 02	1,736,425 20
Amount loaned in year	$	15,994,588 68	14,315,922 51	14,536,562 30	17,412,782 65	18,414,178 42	13,424,025 85
Principal received from borrowers	$	13,698,089 89	12,952,913 72	13,536,863 59	14,506,235 22	14,932,396 86	12,696,880 93
Interest received from borrowers	$	2,310,425 46	2,215,594 35	2,132,685 95	2,159,136 69		2,339,033 63
Received from depositors	$	18,646,755 08	18,442,177 38	18,906,739 40	21,668,895 63	17,284,122 40	13,339,033 63
Repaid to depositors	$	17,307,332 58	17,489,043 35	19,044,154 55	20,080,942 30	16,195,108 73	11,545,328 94
Number of depositors		30,003	28,813	26,792	26,743	23,027	21,843
Borrowed for investment	$	12,584,697 99	39,517,033 62	35,063,318 92	30,751,571 09	32,786,452 70	30,944,914 35
Debentures issued in year	$	7,287,145 61	7,762,048 85	6,852,494 07	6,290,449 63	3,677,252 18	3,610,355 52
Debentures repaid in year	$	4,812,622 88	5,107,883 12	4,134,722 71	4,009,958 86	3,163,250 01	1,795,379 04
Interest paid and credited in year	$	2,336,297 59	2,426,539 01	2,324,682 23	2,189,682 44	2,527,063 74	2,181,037 23
Expenses not chargeable to borrowers	$	711,436 79	711,510 71	670,910 25	636,105 43	750,326 41	528,840 13
Amount invested and secured by mortgage deeds	$	74,564,844 78	69,769,640 96	64,136,758 76	59,404,220 40	49,526,065 26	45,910,756 00
Principal overdue on mortgages	$	2,592,078 54	1,819,462 20	1,507,646 81	1,492,624 14	2,037,382 41	3,647,053 86
Interest overdue on mortgages	$	410,336 93	336,142 71	255,147 46	319,204 34		
Number of mortgages on which proceedings have been taken		715	658	690	768	799	1,060
Amount of mortgages on which proceedings have been taken	$	1,708,177 29	1,534,476 08	1,275,303 42	1,493,571 06	1,298,147 38	1,845,806 22
Amount chargeable to property held for sale	$	2,608,077 14	2,155,814 44	2,230,243 45	2,362,180 01	2,497,297 52	2,645,820 88

PART V.

MINES AND MINING OPERATIONS.

INTRODUCTORY REMARKS.

The collection of mining statistics and information on mining operations does not yet appear to strike the average manager or owner of a mine as a matter of much importance. He is communicative only when reached personally; to send a schedule by mail, and invite him to fill up the columns for statistics and answer a few regulation questions, appears to have as much interest for him as the circular of a provision dealer in some distant city soliciting an order for camp supplies. Occasionally one is found to make out a full report, and occasionally also one is found ignorant enough to treat the request as an impertinence. In the Bureau's experience, however, it happens very rarely that any one hesitates to give the fullest details of his mining works when called upon personally, and here as well as in other countries this seems to be the only successful way of gathering the information. But in order to make a complete report of the industry in the province each year a larger staff and a more liberal appropriation would be required than have yet been provided; and until we are better equipped in this way, or until some arrangement is made for co-operation with the Geological Survey at Ottawa, it cannot be hoped that material for a full annual report will be collected and prepared for publication. One of our sources of information on the industry is the trade returns of exports of the Dominion; but from these it is not possible to get the total production, since considerable quantities of almost every article in the list are consumed at home. Besides, it is only in the case of two or three exceptional articles, such as coal and petroleum, that a province can be credited with the quantity of its own output entered in the export tables. The extent of our exports for the whole Dominion are presented in the following table by quantity and value for (1) the six fiscal years of the present decade, 1881-6, (2) the yearly average of those six years, and (3) for the last fiscal year:

Articles.	Totals for 1881-6.		Yearly average, 1881-6.		1886.	
	Quantity.	Value.	Quant'y	Value.	Quant'y	Value.
Coal..... tons.	2,696,292	$7,374,704	449,382	$1,229,117	493,508	$1,416,160
Gold quartz, dust, etc.	.....	5,770,854	.....	961,809	.....	1,210,864
Gypsum, crude..... tons.	795,335	793,771	132,556	132,295	107,237	114,736
Oils, mineral, coal, etc.. gals.	1,547,518	66,941	257,920	11,157	260,449	30,957
Antimony ..... tons.	2,299	97,371	383	16,229	903	38,320
Copper ..... tons.	77,106	1,191,807	12,851	198,635	5,224	291,397
Iron ..... tons.	220,673	610,750	36,779	101,792	7,542	23,039
Manganese ..... tons.	8,427	189,889	8,427	31,648	2,074	45,608
Silver* .... tons.	249	109,400	42	18,233	81	25,137
Phosphates ..... tons.	113,689	2,117,437	18,948	352,906	25,974	431,951
Salt .... bush.	1,505,974	149,978	250,996	24,996	384,493	26,749
Sand and gravel ..... tons.	428,264	104,992	71,377	17,499	102,795	23,195
Slate* ..... tons.	2,091	31,782	349	5,297	282	4,552
Stone, unwrought..... tons.	138,055	406,303	23,009	67,717	15,259	61,950
Other articles	.....	574,085	.....	95,681	.....	206,532
Totals...	.....	19,590,064	.....	3,265,011	.....	3,951,147

* The exports of silver are given by quantity for the four years 1883-6, and the exports of slate by quantity and value for the five years 1882-6.

The leading articles, it will be observed, are coal, gold, copper and phosphates, and these make up 85 per cent. in value of the whole exports for the six years. Iron ore, in spite of the great deposits we possess, is actually of less importance than gypsum as an article of export trade, and the figures for the last fiscal year are far below the average of the six years. The total export of salt for the six years is barely 40 per cent. of our import of that commodity in the last fiscal year alone, although the wells of the Huron district have a producing capacity sufficient to supply the entire market of the Dominion twice over.

Comparing the exports of 1886 with the averages of the six years, it will be noticed that there is an increase in coal, gold, mineral oils, antimony, copper and manganese (in value although not in quantity), silver, phosphates, salt, sand and gravel and the miscellaneous articles, while there is a decrease in gypsum, iron, slate and unwrought stone. The value of our exports of minerals in 1886 was only $3,951,147 against imports of $8,126,238, in face of the fact that our country is one of the richest mineral regions on the whole earth.

SILVER.

It is the prevailing opinion of explorers for the precious metals that silver occurs at many points throughout the whole archæan region of northern Ontario from the Ottawa river to Lake of the Woods ; but all mines of known extent and value are located in the Thunder Bay district, within a radius of fifty miles of Port Arthur, and chiefly in trap-topped mountain ranges of Animikie slates. Port Arthur is the commercial centre of this district, and is closely identified with the mining industry. Its merchants furnish supplies for the mining camps, its hotels are summer quarters for men who have already invested or who are seeking investment in mining properties, and it is the starting-out place for visiting parties to the mines now being operated, as well as of exploring parties for mineral treasures yet undiscovered.

The best known mining locations of the present time are situated in a broken range of mountains which extends from the township of Paipoonge to Whitefish lake, and forms the southern bound of the valley of Whitefish river, a tributary of the Kaministiquia. The most easterly of these locations is at Rabbit mountain, beyond which lie in succession the Beaver, Porcupine, Silver Mountain and Silver Bluff locations—the latter about thirty-five miles in a straight line south-west of Port Arthur. The Rabbit mine is not more than twenty miles in a straight line from the Port, but by roadway it is not less than twenty-eight miles ; Silver Mountain mine is by roadway about forty-five miles, and Whitefish lake is five miles west of Silver mountain.

To make the round of the various mines and prospects of this region is an undertaking not to be envied. I left Port Arthur on Wednesday, 1st of September, in the company of two citizens of that town, and supplied with a week's provisions. We went by the Oliver road through the townships of McIntyre and Oliver to Murillo station on the Canadian Pacific. These townships have a number of settlers, some of whom have large clearings ; but the soil does not appear to be of very good quality, and grain crops do not ripen until late in the season—probably a result of late sowing. The Oliver road has been opened some distance west of Murillo, leading near to Kakabeka falls on the Kaministiquia. A colonization road diverges from the Oliver a mile west of the station ; it strikes southward through Paipoonge, crosses the Kaministiquia on a substantial wooden bridge and trends south-westward in the direction of Beaver mine. Sending the wagon ahead by this road we crossed the country to the falls, forded the river two miles lower down, and, after a tramp of several miles through woods, came on the road about half way between the bridge and Beaver mine. Above the falls on the left bank the land is wooded with pine, tamarac, balsam, birch, cedar and poplar ; below it has been swept by fire, and nothing remains of the forest but a slashing of charred and half-decayed timbers. Along the flats and up the sloping bank of the river there is a luxuriant growth of wild pease, most of the vines fruitless, but a few heavily laden with pods, each of which contains five to seven black peas the size of a homeopathic pill. A few vines were still in

blossom, the lower flowers of a cluster being pink, the upper pale purple, and blending in the intermediate ones into a delicate shade of blue. July is the blooming season, and the vines are then said to be rich and brilliant in coloring. The right bank of the river is still densely wooded, and the soil appears to be deep and of excellent quality. In the valley of the Whitefish, which joins the Kaministiquia about three miles below the falls, the land is undoubtedly fertile, and unless injured by forest fires it can hardly fail to grow bountiful crops when cleared and brought under cultivation. The located line of the proposed Colonization railway crosses the Kaministiquia near the mouth of the Whitefish and follows the valley of the latter up to its source, near Little Gull lake, a distance of not less than twenty-five miles.

The Beaver Mine.—This mine is situated on Beaver mountain, location 97 T, in the township of O'Connor. It is 11½ miles from Murillo station, on the Canadian Pacific railway, and within a short distance of the new government road. The mountain runs north-east and south-west, and at its summit is about 240 feet above the plain. It is cut by the Beaver vein, which has a direction of east by south-east and west by north-west, traceable nearly the whole distance across the mountain. This vein is intersected by two, if not three, smaller veins, running south-west and north-east, and openings have been made in the mountain at various points. Three adits have been driven into the mountain, each of which forms a base of work into the vein. The third, or lowest, enters from the west side about 20 feet above the level of the plain in a south-easterly course, through trap and slate, and strikes the vein at a distance of 200 feet from the opening. Following the vein, it was driven at the time of my visit (September 2) a further distance of 328 feet, where it connected with the main shaft from the top of the mountain. At 516 feet the drift strikes the cross-vein, into which openings are made westerly 52 feet, and easterly 66 feet. In the main drift shows of silver have been found along the whole distance in the vein, but the richest indications are presented in the cross-vein, either in the form of free and black silver, or of mineral-carrying silver. It is proposed to sink a shaft on the south-west and north-east vein about 25 feet from the point of intersection, and on the east side of the main vein, where the richest show of ore has been found, partly for the better ventilation of the mine, and partly to facilitate the working of it. The second adit is driven from the eastern side of the mountain, about 68 feet above the third. Its course is southerly, and is intended to strike the shaft which has been sunk from the top of the mountain to the third level. The first adit is on the west side of the mountain 38 feet above the second, and has been driven a distance of 300 feet to join the main shaft, and further on in a southerly direction about 100 feet along the course of the vein. The mountain is capped with 20 to 50 feet of trap, at the base of which, on the eastern side of the apex, a shaft has been sunk a depth of 142 feet, connecting with the third adit. A second shaft has also been sunk on the eastern side of the mountain on the Beaver vein to the depth of 20 feet, where the show of ore is about the same as at the other openings. The total depth of shafts on the works is 162 feet, and the total length of drifts 1,067 feet, in addition to which there are prospecting drifts which aggregate 250 feet. There were employed in September sixteen miners, six dirt passers, and one ore sorter. Of these, eighteen were working eight hour shifts, and five others ten hours a day. The drilling in the third or main adit is carried on by means of two air drills, by the aid of which the tunnel is advanced at the rate of 4½ feet each 24 hours. The average rate of wages for miners and laborers is $2 per day, without board.

At the time of my visit a silver mill was in process of construction in connection with the Beaver mine. It is situated on Silver creek, about 2,000 feet south-west of the mine. It is a substantial frame structure, 121 feet by 40, with an engine and boiler-room attached, 40 feet by 36. It is built into the bank at the base of the ravine, and has a total height from the basement to the level of the ore bin on the fifth bench of 55 feet. The engine has a capacity of 200-horsepower, and is driven by two steel boilers, each 16 by 5½ feet. The mill is double-boarded, with an inter-lining of tar paper, and the roof is covered with sheet iron. Its capacity with the machinery that has been provided is 30 tons per day, but this may be increased to 100 tons per day without adding

to the driving power. An abundant supply of water for the stamps, it is believed, can be procured by the construction of a dam across the creek, just above the mill. A retort house for smelting the ore, 20 by 24 feet, will be erected about 100 feet north-west of the mill. The assay house, with complete apparatus for analysis, stands a short distance east of the mill, and is in charge of a graduate of the University of Gratz. The mine is owned chiefly by Mr. R. G. Peters, of Manistee, Michigan, who purchased a seven-eighths' interest in it in December, 1885—Mr. Daunais, of Port Arthur, one of the original proprietors, retaining the remaining one-eighth interest. Mr. F. S. Kirkland is in charge as manager, and in addition to directing the works of the mine and the mill he employs a force of teamsters, choppers and laborers in connection with a saw mill, and in clearing off the land preparatory for putting it under crops.

Silver Creek Mine.—This mine is three-quarters of a mile south-west of the Beaver mine, on the west bank of Silver creek, in the township of O'Connor. The gangue is quartz and spar in a formation of black slate, and carries black and native silver, blende, galena, iron pyrites, etc. Its course is nearly east and west, and it dips slightly to the south. An opening has been made into the western bank of the creek, and a level has been driven about 150 feet. About 60 feet from the point where the vein is struck a shaft has been sunk to the depth of 70 feet. The work was begun on the 3rd of June with eleven men, and was continued until the 15th of July. It was mainly, however, development work, and was discontinued as soon as it appeared to the satisfaction of the owners that the property was a valuable one, awaiting the completion of the mill at Beaver mine. Mr. Peters owns a five-eighths interest, Thomas A. Keefer of Port Arthur a quarter interest, and Oliver Daunais of the same town an eighth interest.

Porcupine Mountain.—This mine is on Porcupine mountain, location 96 T, in the township of Gillies. It is 12½ miles from Murillo station, and a quarter of a mile east of the government road which intersects the location. The mountain is black clay slate, capped with trap, and the vein is a continuation of the Silver creek vein. Its course is nearly east and west, with a slight dip south. The gangue is the same as that of the Silver creek mine and carries the same minerals, the width of the vein being about three feet. Three adits have been driven from the west side, the highest a length of 50 feet, the second 200 feet and the third 50 feet. The vein increases in width in the lowest drift, and the ore is richer in silver than in the upper drift. In the middle one a considerable quantity of ore has been stoped out, and although no thorough test of its value has been made it is apparently what miners call "good pay stuff." On the eastern side of the mountain a shaft has been put down on the vein 56 feet (September 2). At this depth it nearly reaches the level of the lowest adit on the west side, and it is proposed to work the vein from both sides of the mountain. Twelve miners have been employed on the works during the summer, by day and night shifts, and have averaged 7 feet per week in the shaft and 12 feet in the drifts. The rate of wages is $2 per day, without board. Mr. Thomas A. Keefer of Port Arthur is sole owner of the property.

From the top of Porcupine mountain a fine view is obtained of the region. Three miles eastward, across a low range of hills, is Rabbit mountain; a mile and a-half north-eastward is the southern slope of Beaver mountain; stretching westward as far as the eye can see is the deep and wide valley of the Whitefish; twelve miles south-westward is Silver mountain, while midway is the bold outline of the Palisades. The colonization road has been completed to a point about a mile beyond Porcupine mine, and thence to the mines at Silver mountain traffic is carried over a rough and badly cut up winter road. The land, however, is well timbered with white poplar, spruce, balsam and jack-pine, and the soil is of very fair quality. The low branches of the balsam and jack-pine are festooned with reindeer moss, which supplies the carribou with his winter fodder. We camped in these woods Thursday night, and Friday morning one horse of the team was so disabled that we were obliged to return on foot, spending a few hours at Rabbit Mountain mine reaching the Kaministiquia ferry at a late hour in the evening, and Port Arthur the following day.

Rabbit Mountain Mine.—This mine is on locations 40 T and 59 T, south of the township of Paipoonge, and is operated by a company of St. Paul capitalists known as Syndicate 40 T. The 39 T location is the property of the Rabbit Mountain mining company, but the work is carried on by the syndicate. The vein runs north-east and south-west, dipping very slightly to the north-east, and varying in width from two to twelve feet. The shaft is sunk on 39 T, within 80 feet of the line between this location and 40 T. Its depth at the time of my visit (September 3) was 170 feet. The first level or gallery is at 45 feet from the surface, and is 200 feet in length north-eastward. The second level is at 80 feet, and has a length of 250 feet in the same direction. It also extends 60 feet in the opposite direction. The third level is at 150 feet; it has been driven north-east 110 feet, and south-west 40 feet. At the second level a cross-cut has been made, 100 feet from the shaft, which runs north-west 110 feet. A winze has also been sunk from the first level to the second, and one from the second to the third. The first level has been stoped out to the surface. The ore, which is in a gangue of calc spar and fluor spar, is found very rich in pockets, but the whole of it is milled. The mill, which was erected last summer, stands a short distance to the north-east of the mine, and is built into the face of one of the foot hills. It is a frame building, the main part being 30 by 110 feet. The engine-room is 26 by 30, and the retort house 16 by 20. The machinery for milling is one of Fraser & Chalmers', standing on six benches, and is driven by one of Goldie & McCulloch's engines of 50-horsepower. The upper bench is on a level with the top of the hill, on the north-west side of the mill. The ore is delivered here from the mine, and is fed into a Blake breaker, which has a capacity of forty tons per twenty-four hours. In this machine the ore is broken into fragments and conveyed by a self-feeder into a wet-crushing battery of five stamps which have a capacity of fifteen tons per twenty-four hours. Here it is reduced to a fine sand, and is forced through a 60-mesh sieve and carried on to two Frue vanners. These consist of endless India rubber belts, which are carried slowly forward, and have a slight side or wriggling motion. The belts slope gently backwards, and the water carries the sand in the direction of its flow. The mineral, being heavier than the sand, settles on the belts in the process of the wriggling motion, and is carried forward and under, where it is washed off in a bath of water. The bath is emptied every twelve hours, and the concentrates are stored for smelting. The waste material is carried down through pipes to four slum tanks, from which it passes to two amalgamating tanks, and is there treated with quicksilver, blue-stone, cyanide of potassium, salt and soda. The mixture is heated by steam to 165°, and worked for five hours in a muller which makes 65 revolutions per minute. It is then drawn off into a settler, where another muller revolves from 12 to 15 times per minute in clear water, the amalgam settling at the bottom of the pan and flowing into a bowl, from which it is dipped into a strainer. All the quicksilver not uniting with the silver passes through the strainer, and the amalgam proper remains within. The water in the settling pan carries off all the tailings into the ravine below the mill. The slums, it is said, average from 7 to 11 ounces of silver per ton, and the clearer the water the higher is the average product. It is claimed that by this process the total loss is not more than 1½ ounces of silver per ton of slum, and Dr. Lehmen, the chemist and present manager of the company, claims that by close working in the amalgamation process the waste may be reduced to half an ounce per ton. By far the larger portion of the silver, however, is taken out of the ore in the form of concentrates, which are separated from the sand by the vanners; but at the time of my visit only a small portion of this had been smelted, and the average richness of the ore was not known. The water supply for the stamps is obtained in part from the mine, and in part from a small lake on the summit of the mountain, half a mile to the south of the mill. It was feared, however, that these sources would prove insufficient, and that it would be necessary to collect water by the construction of one or two dams across the ravines which enter the valley in which the mill is located. The mill began running on the 1st of August, and had been running continuously night and day up to the time of my visit. About twenty miners are employed constantly at $2 per day, thirty laborers or surface men at $1.75 per day, and twelve mill men whose wages range from $2 to $2.50 per day. A 15-horsepower engine is used to lift ore out of the mine, and a 35-horsepower boiler generates steam for working

a pump in the bottom of the mine, whence the water is forced up to the mill. The syndicate have already expended on the property and works about $70,000. The officers are, Maurice Auerback president, J. H. Burwell vice-president, H. Sahlgaard treasurer—all of St. Paul, Minnesota.

Jarvis island lies about twenty-five miles south-west of Port Arthur. I took passage on the *Campana* on Monday, which, after going up the Kaministiquia to Neebing, passed out by Flatland, Mink, Spar and Jarvis islands, on its way to Duluth. A small row-boat which put out from Jarvis took me to that island early in the afternoon, and after inspecting the mine I returned to Port Arthur by a fishing smack the same night. Part of the trip was made at a spanking speed, but the breeze died away early in the evening and the greater part of the distance had to be made with the help of the long oar. It was ten o'clock before we entered the harbor.

Jarvis Island Mine.—Jarvis island is one of a group of islands lying on the western side of Thunder bay, two miles from the north shore mainland, about a half a mile in length, and a quarter of a mile in width, irregular in shape, and composed of trap and slate. The mine is near the western side of the island, which the vein crosses in a north-west and south-east direction. The vein itself ranges from 12 to 18 feet in width, and dips north-east about 50°. It is composed of baryta, calc spar and quartz, the former being on the side of the hanging wall and the latter on the side of the foot-wall. The works were carried on by an English company about twelve years ago. Three shafts were sunk at that time, the first a depth of 152 feet, the second a depth of 40 feet and the third a depth of 70 feet. In the first shaft three levels were driven, one at 80 feet from the surface, the second at 96 feet, and the third at 145 feet, the total length of the three levels being 130 feet. During the early months of 1886, Mr. Alexander McEwan of London, England, formed a company which purchased this property, and also an option on Spar island and 6,000 acres on the mainland. The old Prince mine, which was operated more than forty years ago, is on the mainland property, and the vein is supposed to be the same as that which crosses Jarvis island. The new proprietary is known as the Jarvis silver mining company (limited), of which George A. Thompson of London is president, and William Cash secretary-treasurer. Work on the Jarvis island mine was resumed on the 27th day of May last, with captain John Trethewey, of the old Silver Islet mine, in charge as manager. The machinery consists of a 15-horsepower double cylinder engine, and a hoisting drum and pump, and is placed within a few yards of the water's edge, near the deepest of the old shafts. The first undertaking was to clean out this shaft, which was filled to within a few feet from the surface with water and silt, after which they proceeded to extend the levels. At the time of my visit (September 6) the 80 foot level had been extended 120 feet to the south-east, and the 96 foot level 20 feet in the same direction, and stoped about 5 feet overhead. At the 140 foot level the vein has been cross-cutted 12 feet to the hanging wall, and drifted on that wall an additional 40 feet. The intention is to drive all the levels south-eastward along the vein to the slate formation, which lies about 200 feet from the opening of the shaft. Towards the north the work cannot be extended, owing to the proximity of the shaft to the lake. A show of silver has been found at the 96 foot level, about 20 feet from the shaft, which is said to assay about $700 to the ton. Traces were found in the second level and also in the third, and the work will be continued until a thorough test is made. The company employ 21 men, of whom 12 are miners and 9 laborers. The former are paid at the rate of $2 per day and the latter at the rate of $1.73 per day, without board. All shows of silver found in the mine are carefully assayed by Mr. Arthur L. McEwan, who is also clerk of the works.

On Tuesday morning, September 7, I set out again for the Silver Mountain district, accompanied by Mr. Wicksteed, C.E., of Port Arthur, engineer and surveyor of the proposed Colonization railway. We arrived at Silver mountain early in the evening, all but the last twelve miles of the road being in first rate condition for travel.

Silver Mountain Mine East.—Work at this mine was carried on during the season of 1885 by a company of Cleveland capitalists, who held a six months' option on the property. Two adits were driven into the face of the mountain and two shafts sunk upon the vein from the top, but the show was regarded as so unsatisfactory that work was stopped in October and the option given up. In January, 1886, the original proprietors (Messrs. Oliver Daunais, John Trethewey and Richard Trethewey) resumed possession and proceeded to make further developments. The upper adit was driven in a further length of 40 feet in the direction of the vein, which was struck very rich at that point. The total length of the upper adit is now (September 7) 120 feet, and of the lower adit, 250 feet. Several cross-cuts have also been made, discovering branch veins or feeders which are found to be rich in silver. At the time of my visit the mine was closed, pending negotiations for its sale to a company of English capitalists, which have since been concluded. The abandonment of the property by the Cleveland syndicate appears to have been due to the fact that the manager in charge had no previous experience in silver-mining. Assuming that the vein was perpendicular, instead of dipping as it does at an angle of nearly 30 northward, he concluded on reaching a vertical line from the surface of the vein, and finding no sign of it, that it had pinched out. The later development work, as stated above, shows that he was 40 feet out of the true reckoning.*

Crown Point Mine.—This mine is on the Silver mountain range, half a mile north-eastward of the Silver Mountain East mine. Operations were carried on continuously during the winter of 1885-6, and through the spring and summer to the end of July. Two openings have been made in the side of the mountain, the lower one of which has a length of 137 feet, with two cross-cuts 23 and 45 feet respectively; and the upper one a length of 108 feet with a cross-cut of 19½ feet. Good shows of silver have been found in both drifts.

Silver Mountain Mine West.—This mine has been idle during the whole of the past year, no operations having been carried on at it since the development work of 1885. Many rich samples of ore have been taken out of the mine, but its real value has not yet been determined.

Silver Bluff Mine.—The Silver mountain vein, on which are situated the East and West Silver Mountain mines, is clearly traceable across the whole ridge, but it disappears under the talus on the west side. Miners and explorers were for some time convinced that it re-appeared in Silver Bluff, a low mountain range about two miles farther west, beyond a small stream which flows northward to join Whitefish river. Many searches were made for this vein on the face of Silver Bluff, and numerous cross-cuts mark the attempts of prospectors to find it. At length, about the middle of August, two French Canadians, Messrs. Giroux and Ledret, made a find which led to its discovery. A large lump of the vein rock was found by these prospectors on the shore of an old beaver pond, having apparently been taken out by the beavers in the course of their construction work. Upon the discovery of this specimen a deep cross-cut was made at the point and the vein was exposed to view. The main vein is from two to two and-a-half feet wide, with several stringers of from eight to twelve inches wide. The location was surveyed and secured without delay, and the property is now in the discoverers' hands awaiting development.

Thursday forenoon we crossed the mountains to Whitefish lake, a distance of five miles. A stream known as Beaver creek flows through the valley between the two ranges of mountains to join the Whitefish. A colony of beavers have their home on this creek, and the trail to the lake crosses one of the dams occupied by them. To the opera-

*Mr. Blyth, of the Silver Mountain mines company, writes as follows under date of March 15: "The Silver Mountain mine was bought by the present company for $150,000, and the capital of $300,000 has been subscribed for in England. We commenced operations last October and are sinking shafts from the top of the mountain and drifting to form a connection with these shafts. It is too soon yet, however, to be able to form an opinion as to the ultimate result."

tions of these industrious denizens is due the discovery of Silver Bluff mine ; but they are seldom if ever seen, and their presence is only known by their works.

Whitefish lake is about eight miles long and two miles wide. It is a shallow body of water, containing three or four rocky islands, and having along the northern side and at the western end an estimated area of 1,200 acres under wild rice. The former outlet is supposed to have been through a depression at the north-east corner into Whitefish river, but its waters now flow out at the south-east corner through Little Whitefish river to the Arrow, which descends from Arrow lake to fall into Pigeon river.

The rice fields furnish in their season a liberal supply of food to the Indians of the Pigeon river reserve, numbers of whom we saw gathering their harvest. Two squaws generally, but sometimes an Indian and a squaw, "man" a canoe. One squatted in the prow handles the paddle with circle-strokes so as to shell as little of the grain as possible, while the other in the stern, a cedar stick in each hand, sweeps in the rice and beats off the grain as the canoe moves on. Two boatloads are considered to be a day's work, which usually ends at noon ; for unless pressed by hunger the Indian observes the short-hour system.

"Injin got all the time there is" is his motto for life ; and he hunts, fishes, picks berries and gathers rice in successive seasons of the year as his necessities require. He does not kill or destroy for any delight it affords, as the white man often does, but that he may have food and raiment, and therewith he is content. The white man is an exterminator, and the beaver, the deer, the otter, the buffalo, as well as the wolf and the bear, disappear before him ; while the red man kills only for his needs, and so where he is lord of the domain the meat and fur-bearing animals are not likely to suffer extinction.* —But I have digressed.

We landed on a glaciated shore of black trap and visited the camp of the Indians. The tents were of birch bark, and nearly all the occupants were Indian bucks, half naked children, a few old crones doing kitchen work, and packs of wolfish dogs,—the younger squaws evidently being out in the rice fields. The chief of the tribe is commonly called Club-Foot, from a deformity of one foot, and he took the lead in the conventional "talk" after my formal presentation to him by Mr. W. as Big Somebody from Toronto. The principal industry of the camp was drying, dehusking and winnowing the rice. It is dried on a platform of slat-work twenty feet long by five feet wide and supported on posts three feet above ground. The rice is spread on this platform and dried over a slow fire, after which it is gathered into a tub of split cedar built into the ground and there pounded with a pestle or stamp of wood. When thoroughly beaten so as to loosen the husk or chaff, it is winnowed with a birch bark screen, and as there is no lack of wind here in September the operation is simple enough. The rice is then ready for use, and it makes a very palatable dish—when taken with hunger-sauce. In the western end of the lake the rice fields are extensive, and on the way up we met a procession of canoes returning laden to the camp.

Weeso, a very respectable Indian of Grand Portage, Pigeon river, has his summer camping ground at the upper end of the lake. His proper name is Louis Bokachinini, and Weeso is said to be a corruption of Louis. It was he, some persons say, who let Oliver Daunais into the rich secrets of Silver mountain,—the eastern mine for a consideration of $10,000 and the western for $15,000. He is a tall, slim, loose-jointed bachelor Indian of 45 or 50 years, and has the reputation of being a very dutiful son to his aged mother.

From Weeso's camp we followed a long and heavy trail northward, ascending a mountain range 575 feet above Whitefish lake and descending to a small nameless lake whose shore we followed for some distance westward through land of very fair quality. Some prospecting work has been done on a vein near this lake, (Scripture's mine) but no silver appears to have been found.

Following the location survey due west we scrambled up a steep bluff to a level of 600 feet above Whitefish lake, from which a fine view was obtained. Whitefish lake, though several miles distant, seemed to be at our feet. Eastward we look down the

*My authority for these characteristics of the red man is the factor of the Hudson's Bay Company at Nepigon.

valley of the Whitefish river, clothed at varying altitudes with white poplar, tamarac and red spruce, and divided with some regularity by ravines it presents the appearance of fields of green and golden grain. Away to the eastward appears to be the nose of Silver mountain, while what looks like the Porcupine lies far beyond. A long mountain ridge to the northward forms the watershed between lake Superior and Hudson's bay, and at a wide cut in this ridge it is said that a large bed of iron ore has been found.

Taking the line of a location survey still westward across the tableland of the mountain, we cross a muskeg about half a mile in breadth, thinly wooded with spruce and tamarac and richly carpeted with moss. Here and there are clumps of shrubs known as Labrador tea, and the purple-leafed pitcher-plant half filled with water lifts its head out of the moss. From the top of the western bluff we get a sight of the height of land, stretching away to westward and eastward, while in the valley below is the source of the Whitefish river. Not more than a mile from the source of this river lies Little Gull lake, whose outlet runs south-westward to join Sand river, the outlet of Sand lake, which flows southward to Round lake and Frog lake into Arrow lake. Sand lake is about three miles long, and its southern shore is covered with a pine forest which extends southward to Arrow lake.

There is a paucity of animal life in these woods. Only a few species of birds are to be seen, but among them is the Canada bird whose habitat is northern Ontario. I have seen him at Ottawa, in Haliburton, in Muskoka and in the vicinity of Sudbury. We heard one near our camp just as the sun was sinking behind the western hills. "O—poor—Canada-Canada-Canada!" he sang in a chirrupy voice, and not at all as if he meant it even amidst these trappean and Huronian rocks. In Muskoka he strikes three notes before starting off on the refrain, and by the inhabitants of that district he is interpreted to sing, "Hard—times—in—Muskoka-Muskoka-Muskoka!" Another of the birds of this lake Superior region is the Whiskey Jack, known in Maine and Quebec as the Canada Jay. He is close of kin to the Blue Jay,—not quite as talkative, but more familiar; and his presence never fails in camp, especially at meal time. "He likes his glass," some woodsmen say: hence his name in these parts. Partridges were abundant in the fall of 1885, and scores might be shot in the course of a day's travel, but last year we did not hear the flutter of more than three or four in a journey of two hundred miles. Their disappearance is said to be owing in part to bush fires, but chiefly to the intense cold of the winter of 1885-6. As an instance of the unusual severity of the weather, I was informed that a spring creek which runs across Mr. Mackenzie's farm near Murillo, and which is about twenty-five feet in breadth, was frozen solid. In the previous year it abounded with speckled trout, but last summer not one could be found, and the settlers believe that they perished in the ice.

Giroux and Ledret's Mine.—Messrs. Giroux and Ledret have been during the past summer carrying on mining operations upon a vein about six miles north-west of the head of Whitefish lake, near Little Gull lake and nearly opposite the source of Whitefish river. The vein runs nearly east and west, and is supposed to be a continuation of the Silver mountain. The shaft is about 25 feet deep and a few small specimens of silver have been taken out, but so far the prospect does not appear very hopeful. The general character of the rocks in its vicinity indicates that the mine is on the border line between the Cambrian and the Huronian formations.

We left the mining camp of Geroux and Ledret early in the morning of the 10th and passed by the mine at the base of a bluff down into the valley of Gull creek: thence across Sand river and through a dense swamp of cedar to the foot of a steep mountain ridge on the north side of Round lake. Then began a series of ascents and descents which continued with little interruption until the end of the day's journey on Arrow lake. Here not many years ago was an extensive pine forest, utterly destroyed by fire, and progress over the dead timber, the new undergrowth and rough boulders was painfully slow. But at frequent intervals we came across the trail of the prospector for silver,

and a number of surveys have been made in this region by parties for the securing of claims. Before sighting Frog lake, into which Round lake debouches, we passed through a splendid forest of pine—mostly Norways, of goodly size, tall and shapely, fit "to be the mast of some great admiral." This forest extends from Frog lake for a considerable distance westward, and Mr. W. informed me that the total area is about ten square miles, estimated to yield about 30,000,000 feet of lumber. Forests of still greater extent lie along the south shore of Arrow lake, composed almost wholly of pine. This lake is a beautiful sheet of pure, sparkling water, whose total length is about fifteen miles.

We passed a wet night under the canvas, and Friday morning the wind was blowing a gale from the north-west with flurries of snow and rain. Starting at six o'clock, W. packed a bark canoe across a portage of four and a-half miles to Whitefish lake, making the way down a steep descent of 400 feet. The landing at this point of the lake is a slimy quagmire, reminding one of the spot where John Ridd and Carver Doone met for the last time. The canoe was pushed out between two poles, we got in with extreme care and set off through the mire and a dense vegetation of lily-pads, rushes and rice, for the open water. Our packer (a Frenchman) sat in the prow and W. in the stern, behind whom as the last to get aboard was the packer's dog. Now of all things to be taken on a bark canoe a dog is probably the most dangerous; and all that need be said of the incident of that morning is, that were it not for the nerve and skill of Mr. W. these notes would have never been extended. The Frenchman and his dog were left at the first stopping place, and we rode the waves of the Whitefish for the rest of the way in comparative safety. Silver Mountain mine was reached early in the afternoon, and Port Arthur at one o'clock in the morning.

COPPER.

Copper-mining has been carried on during the past season at one or two points on Lake Superior, but the chief interest in copper ore has centered in the discoveries recently made in the vicinity of Sudbury, at the point of junction of the main line of the Canadian Pacific railway and its Georgian bay branch.

Stobie or Mineral Hill Mine.—This mine is situated on lot 5, concession 1, township of Blezard, four miles north by east from Sudbury station, on the Canadian Pacific railway. It was discovered by Mr. Stobie in August, 1885, and prospect work was begun on it during that year. The vein or deposit extends north-east and south-west, a distance of about half a mile, forming a high ridge with a granite back. The south-east side of the hill shows strong indications of copper ore,—in fact, the earth covering the ore is for the most part gosson or copper earth. An opening has been made in the form of a trench from the foot to the top of the hill and a shaft has been sunk to the depth of a few feet, revealing ore of apparently good quality. On exposure to the atmosphere this ore slakes down so rapidly that what appears to be solid rock is changed in the course of a few months to the consistency of earthy matter. The great mass of it consists of copper pyrites and stringers of galena, and it can be taken out as easily as rock from an open quarry. The height of the ridge is about 50 feet, its breadth from 300 to 500 feet and the length of the mineral-bearing portion about 600 feet, making a total area of about seven acres. A high peak of trap rock forms the southern limit of the mine, and the country rock is hornblende and trap, but chiefly the latter. Without a thorough test, either by boring or working, it is impossible to determine the quantity of ore in this mine. Apparently, however, it is an overflow, and consequently of very uncertain depth. The mine is now the property of the Canada Copper company, which acquired it by purchase from Mr. Stobie.

Exposed Hills Mines.—These mines are on lots 6 and 7 in the 6th concession of the township of McKim, and are composed of a succession of eight hills running along the western side of the north branch of Sudbury creek, their general trend being south-west and north-east. It appears that these mines are but a continuation of the Stobie,

with a portion of barren rock about half a mile in length separating the locations. The first well defined out-crop appears on crossing the creek, with a breadth of 20 feet, increasing in width and elevation toward the south-west. Where the ridge crosses from lot 6 to lot 7 it is about 500 feet in breadth with an elevation about 80 feet. Frequent streaks of white quartz, bearing peacock ore, cut across the out-crop and wherever openings have been made good shows of ore are found. Some blasting has been carried on upon both lots to obtain mineral samples for assays, and these are said to have given good results. The most southerly hill of the range is about 100 feet above the level of the creek, and appears to be one large mass of ore. The discovery of these hills was made in May, 1884, by Mr. Thomas Frood, now crown lands agent at Sudbury, who still (September 15) holds location 7; location 6 is the property of the Canada Copper company.

Murray Mine.—This mine is situated on the main line of the Canadian Pacific railway, being the north-west quarter of lot 11, concession 5, in the township of McKim, and is the property of Thomas Murray, M.P.P., of Pembroke. It was discovered during the construction of the railway, the track of which cuts through the ridge. The vein is about 100 feet in width at the north end and shows ore over its whole extent. It runs south-westerly about 600 yards, crossing into lot 12; then it disappears in front of a hornblende mountain and re-appears on lot 2 in the 3rd concession of the township of Snider, where it is known as the McConnell mine. Little or no development work has been attempted on the property.

Fly Lake Mine.—This mine is on the same vein as the Murray and McConnell mines. It is situated on the shore of a small lake on lot 1, concession 3, township of Snider. It was discovered by Mr. Frood in November, 1884, and was developed by Mr. W. B. McAllister, of Pembroke. Work on it was commenced in June, 1885, when two shafts were sunk, one to a depth of ten feet and the other fifteen feet. The show was so satisfactory that the location, consisting of 1,800 acres, was soon after disposed of to the Canada Copper company for $13,000. The mine has been further developed by the company preparatory to a thorough opening as soon as railway facilities have been provided. The vein may be distinctly traced from the McConnell mine eastward to the main lode half a mile distant, through a succession of hills 150 to 200 yards wide.

Copper Cliff Mine.—This mine, formerly called Butte, is situated on the north half of lot 12 in the 2nd concession of McKim, about five miles to the south-west of Sudbury. It was discovered in May, 1885, by Messrs. Metcalf and McAllister of Pembroke, and is now the property of the Canada Copper company. The general trend of the vein or deposit is south-west and north-east. It is an elbow-shaped ridge with a granitic mass for background, with a deposit of sand and gravel covering the southern face. The height of the ridge ranges from 40 to 50 feet, and the total length is about 600 feet. Work was commenced near the eastern end by removing the drift to a depth of 25 or 30 feet from the foot of the hill, thereby exposing the ore to view and enabling the miners to carry on operations much in the same way as in a stone quarry. At the time of my visit (September 15) the width of the opening was 70 feet, and at its rear was 40 feet from top to base. Seventy-six men were employed at the works as miners and laborers. The mine can be very economically worked, as a large body of ore is above ground and is readily removed by blasting. A large quantity has been taken out and sorted for shipment to smelting works. The nearest of these works is in the state of New Jersey, and owing to the cost of freight all the lean ores are carefully culled out. A railway track has been constructed from this mine to the Algoma branch of the Canadian Pacific, a distance of one mile, and it is proposed to extend the road north-westward to the Fly Lake and McConnell mines, a total distance of 2½ miles.

The Canadian Copper Company.—The Canadian Copper company was organized to acquire and operate copper mines in the vicinity of Sudbury, and is composed of a number of wealthy capitalists of Ohio. S. J. Ritchie of Akron is president, H. P. McIntosh of Cleveland secretary and treasurer, and L. H. Ashmun of Akron superin-

tendent of mines. Mr. Ritchie is well known in Ontario in connection with iron mining operations in the county of Hastings, as well as with the construction and management of the Ontario Central railway, which extends from Trenton to the Coe Hill mine in Wollaston. Of the company's operations at Sudbury Mr. Ashmun writes as follows under date of March 3, 1887:

The company own in the township of McKim, in the district of Nipissing, lots 11 and 12 in con. 2, lot 12 in con. 3, lot 12 in con. 4, lots 4, 5, 6 and south half of lot 7 in con. 6; in the township of Blezard, lots 4, 5 and south half of 6 in con. 1; in the township of Snider, Algoma district, the south half lots 1 and 10 in con. 1, lots 1 and 2 in con. 2, lot 1 and north half of 2 in con. 3, south half of lot 1 and south-east quarter of lot 2 in con. 4; and in Creighton, lot 1 in con. 1.

The mine or opening which you saw, and which was called the Butte, now goes by the name of Copper Cliff, and is on lot 12, con. 2, of McKim. One mile of railway extending from the Algoma branch to this mine was built in August and September, 1886. From this mine 167 cars of ore were shipped in September, October and November, to New York. At this point an open cut was made on the side of the bluff, which rises to a height of 60 to 70 feet, and from this cut the ore shipped was taken. In November a shaft was started from the bottom of this open cut which has now reached a depth of 40 feet below the starting point, and 80 feet or more from the top of the overhanging bluff. As all the work is done by hand it has been necessarily slow. A plant of machinery consisting of two 50-horsepower boilers with a three-drill compressor and a hoist, has been purchased and will soon be ready for use, and work will be carried on to much better advantage than at present. The number of men employed in mining, chopping and clearing was in May 25, June 50, August 65, September 75, October 85, November 75 and December 65. There was during these months considerable work done at three other places near this mine by men included in the above statement, but no ore was shipped from these places on account of the distance from the railway, which would necessitate hauling with teams to the cars.

During the winter a line of railway has been built by the C. P. R. from Sudbury north to the Stobie mine, about four miles distant. At this mine the company, in January and February of this year, has erected a building for a 50-horsepower boiler and three-drill compressor, and the machinery has been put in and is now being used to drive two tunnels into the hill, which rises to a height of 60 to 100 feet above the creek level. This hill is apparently a solid bed of magnetic pyrite and copper ore. Work on this mine was commenced on February 21st, and at this time the copper ore presents a very fine appearance and the quantity seems to be remarkably abundant.

IRON.

Operations in the iron mines were comparatively quiet during the past year, little having been done except development work at the mines on the line of the Kingston and Pembroke railway. The total output of these mines, shipped for smelting, was 3,419 tons, valued at $11,966.

BUILDING STONE AND LIME.

Vert Island Quarry.—This quarry is situated on the west side of Vert island in Nepigon bay, and is owned by a company of Chicago capitalists of which General McArthur is president. It is a reddish brown sandstone, hard and durable, and is well suited for building purposes. An area of about 50 acres has been explored and the stone is found to improve in quality in the lower layers. The thickness of the stratum ranges from 20 to 40 feet, gradually increasing from the shore. Houses have been erected on the company's property for the accommodation of employés, a dock constructed at deep water, a railway track laid down from the dock to the quarry, and all development work completed. The quarry was opened in 1881, and has been operated each summer season since. In the first year 8,000 cubic feet of building stone were taken out, in the second season 15,000 feet, in the third season 30,000, in the fourth season 50,000, in the fifth season 40,000, and to the end of August in the past season 25,000 cubic feet. The reduced output in 1886 is stated by the manager to be due to labor troubles in Chicago, which resulted in the stoppage of building operations in that city for several weeks at the beginning of the season. The stone is subject to a duty of $1 per ton in the United States, but it sells in Chicago and Buffalo at $1.25 per cubic foot. It can be delivered in Toronto at $1 per cubic foot. The company has $75,000 invested in the works.

The Credit Forks Stone Co.'s Quarries.—The Credit Forks stone company is composed of Dr. Patullo of Toronto, Joseph Patullo of Orangeville and Judge Scott of Brampton, and was organized about seven years ago. They own and work two quarries at the Forks of the Credit. One of these was opened seven years ago, on lot 9, 4th concession west of Caledon, and has been worked continuously ever since. The upper layers are limestone, below which is a bed of sandstone ranging from 6 to 9 feet in thickness. The greater portion of this stone is of the brown variety, but here and there the grey band appears. A small portion of the quarry—apparently a slide—was found on the face of the gorge, extending back about 30 yards, from which the whole of the brownstone has been taken out. A space of about 35 yards in breadth separates this portion of the quarry from the bed proper which was opened in 1884, and which lies under 25 feet of limestone. The latter is used for rubble, and as the whole of it finds a ready sale the cost of stripping the sandstone is fully met. The brownstone is of a good uniform color, with few suncracks or "dries," and may be taken out of any size which can be handled. The quarry is operated by piece work, the number of men employed ranging from 7 to 30, but the average for the season is about 8 quarrymen and 10 laborers. The quarrymen are paid $1.50 to $1.80 per day and the laborers $1.25 to $1.35. In 1884 the average number of men employed was 65, the pay roll for that year ranging from $2,000 to $2,200 per month, and the value of the output being $3,500 per month. During the past year, however, the quantity of dimension and coursing stone taken out was only 8,000 feet, and the total value of the output about $4,000. The new quarry is on lot 8, 3rd concession west of Caledon, on the south side of the river, just below the Forks, and about 150 feet above the level of the railway track. The bed of brownstone is about 12 feet in thickness and is generally of the same quality as the stone of the old quarry, but portions of it are darker in color and it is nearly free from suncracks. It was opened early in June, 1886, and the number of men employed upon it ranged from 15 to 32, five of whom were quarrymen and the rest laborers. The greater portion of the labor was spent in stripping the quarry, and it was not until late in the season that the sandstone bed could be worked to advantage, the total output being valued at $2,000. The stone is delivered in trucks over a double track inclined road to the railway line below.

Armstrong & Sharpe's Quarry.—This quarry is situated immediately west of the Credit Forks company's new quarry, from which it is separated by a deep gorge, and is owned by Mr. F. Frank of Orangeville. The work of stripping was begun in 1884. The sandstone was covered with 27 feet of earth and limestone, the latter of which is disposed of to builders for rubble. The brownstone has a thickness of 10 feet, below which is about 2½ feet of grey sandstone. It is very free from dries, and is of a deep reddish-brown color. During the past season 9,000 cubic feet of dimension stone, 1,200 yards of coursing stone and 75 car loads of rubble stone were taken out and sent to market, the total value of which is placed at $6,700. Twenty-five men were employed during the latter part of the season, nine of whom were quarrymen at $1.60 to $2 per day and the rest laborers at from $1.25 to $1.45 per day. The quarry is situated about 100 feet above the railway track and the stone is lowered on trucks regulated by a friction drum.

Chisholm's Quarries.—These quarries are the property of Kenneth Chisholm, M.P.P., and are situated on lot 9, concession 4 west, township of Caledon. The property consists of thirteen acres, bounded on the southern and western sides by the river, and on the northern side by a deep gorge. In one important respect the formation here differs from the formations on the opposite side of the river, in that the limestone has been completely denuded, the only remains of it being fillings of fissures of the sandstone. The hill is covered with a bed of clay ranging from four to twenty feet in thickness, which has only to be removed in order to reach the brown sandstone. This has an average thickness of about eight feet, below which is a bed of greyish composite freestone, suitable for foundations and bridge work. The hill has been stripped along the south and east sides, and a track laid for trucks connecting the quarry with the railway track on the opposite side of the river. The stone is generally free from cracks or dries, and is of uniform color. The best quality is found on the south-eastern side of the hill, where the principal quarrying is now carried on. The total

quantity taken out during the past year was 15,000 cubic feet of dimension stone, 2,500 yards of coursing stone and 400 cars of rubble stone, valued at $13,350. The force of men employed was twelve quarrymen at $1.70 per day and eighteen laborers at $1.25 per day. A steam derrick and two horse-power derricks greatly facilitate the labor of removing the quarried stone to the trucks. A new quarry has been opened on the west side of the north branch, where brownstone of a very good quality has been obtained: the depth of the layer ranges from six to ten feet.

Five other quarries are worked east of the Forks, owned respectively by Messrs. Elliott, Smeaton, McFarlane, Balmer and Sharpe. The total quantity of stone shipped from the Forks of the Credit for the year ending 30th October, 1886, was 1,628 carloads, the great bulk of which went to Toronto.

Townsend's Quarry.—This quarry, on lot 30, 6th concession of Chinguacousy, is the property of Messrs. Thomas and Edward Townsend, and has been worked for thirty years. It is chiefly a grey band of the Medina formation, is generally free from cracks and is of good quality. Brownstone is found in some parts of the quarry, but it is cracked much worse than the grey. The best stone for building purposes has been found in the top layers, and this is mostly quarried. During the past two years stone for curbing has been taken out chiefly. The output for the year ending October was 2,000 cubic feet of curbing, 322 square yards of paving and 230 cords of rubble, valued at $1,800. Eight men are employed while the works are in operation, which is usually about six months in the year. Quarrymen are paid $1.50 and laborers $1.25 per day. A switch on the Northern and North-western railway provides an easy convenience for shipping, and nearly the whole product of the quarry is sent to the Toronto market. Extensive lime-kilns were constructed on the Messrs. Townsend's property, at the foot of the limestone escarpment near the quarry, where lime was burnt for thirty-five years, but they have been closed recently owing to the increased cost of fuel.

Foster's Quarry.—This quarry is on the 4th concession of Chinguacousy, about a mile south-west of the village of Cheltenham, and is the property of Mr. Thomas Foster. It is a grey sandstone, forming a table-land about 150 yards in breadth at the foot of the limestone escarpment. The stone is blemished with dries over a considerable area of the quarry ground, but in places it is sound and of good quality. During the past year one or two carloads were shipped daily to Toronto. Six men are employed, whose wages range from $16 to $20 per month.

Shanly's Quarry.—The property on which this quarry is located is 100 acres in extent, being lot 22 of the 6th concession of Esquesing. It was opened upwards of thirty years ago, the stone taken from it having been used in the construction of bridges on the Grand Trunk railway. It is chiefly a light grey sandstone, but in places is a mixture of grey and brown. The stone crops out at the surface and all quarrying so far has been carried on from the surface. The depth of the bed is unknown, but exposures on the bank of a creek which flows through the property shows a thickness of about ten feet. Portions of the bed are perfectly laminated and free from sun cracks, while others show diagonal and cross laminations, which make it almost useless for dimension stone. The farm on which the quarry is situated is the property of Mr. Wm. Scott, but during the last year it was leased to Mr. Britnell, a Toronto stone dealer, who began operations upon it last September. The Grand Trunk railway runs close to the property, but the stone is carted a mile distant to Limehouse station for shipmemt.

Lobb's Quarry.—This quarry is on lot 11, concession 2, township of Esquesing, in the county of Halton, and is the estate of the late Charles Lobb of St. Catharines. It lies five miles west of Milton and one mile from Lawson's siding on the Northern and North-Western railway, whence the stone is shipped. The property is fifteen acres in extent, being a plateau at the foot of an escarpment of Niagara limestone, which is supposed to lie immediately over it. Openings have been made along the face of the exposure a length of about 300 yards, the breadth of the plateau being about 200 yards. The rock is covered with two to four feet of clay and gravel and the thickness of the sandstone bed is about

six feet. At the southern end of the quarry are two layers 2½ or 3 feet in thickness, while at the northern end are four layers each about a foot in thickness. The color is a dark grey, the upper layer being freckled with brown. The under layers are lighter generally, but the shades of color are interchangeable; in some places the freckles are found in the lower layer and only few in the upper. Scarcely any sun-cracks are observable in the stone, and the lamination is almost perfect. The stone works easily, but hardens and bleaches on exposure. The quarry was opened about fourteen years ago, and after being idle for nine years the property was purchased by Mr. Lobb and operations have been carried on continuously since. The present lessee is Mr. Joseph E. Bate, who has conducted the works during the past three years. Last year he took out 4,000 cubic feet of dimension stone from the first of May to the first of November, the stone selling at 40c. per cubic foot f.o.b. Three quarrymen are employed whose rate of wages is $1.50 per day.

Anderson's Quarry.—This is the property of Joseph Anderson, lot 6, 7th concession of Nassagaweya. It is situated in a wood on the face of the mountain, which here trends north and south. There is a good outcrop of sandstone, dark grey and freckled in the upper layers and light grey and free from spot in the lower. Two of the layers show a good lamination, but the lowest ones in the openings have apparently a high percentage of clay in their composition, which causes a too free cleavage. The quarry has been leased for five years to Messrs. Parsons & Hampson, who commenced work upon it on September 20th with four quarrymen. The stone is shipped on the Credit Valley railway at Campbellville station, 2½ miles distant.

Chalmers' Quarry.—This quarry is on Snider's hill, within the corporation limits of Owen Sound, and is situated on the second table-land between the Sydenham and Pottawatamie rivers. The property comprises 16 acres and is owned by Mr. David Chalmers, who has worked it during the past three years. The stone is found on the surface, varying from one to three beds, each of which is two to eight feet in thickness. It is a hard, solid grey limestone, and is used chiefly for bridge building. Quarrying was carried on during the whole of last year, and in the last five months a large force of men was employed taking out stone used in the construction of Credit Valley railway bridges. The total number of men employed in the latter part of the year was seventy-two, including two foremen at $100 per month, thirty-one stone-cutters at 35 cents per hour, twenty quarry-men and derrick-men at 17½ cents per hour, seventeen laborers and teamsters at $1.25 per day, together with ten teams at $3 per day. About 5,000 cubic yards were taken out up to the end of November for bridge building, the whole of which was cut at the quarry for its place in the work. The price of the stone f.o.b. is $6 per cubic yard.

Battle's Quarry.—This quarry is situated in the township of Thorold, in the county of Welland, and covers an area of about 56 acres. It was opened in 1875 and has been worked continuously since. There is 10 to 12 feet of earth stripping and a stratum of grey limestone about 16 feet in thickness, underlying which is a layer of cement stone about 7 feet in thickness. No dimension stone has been taken out, but rubble to the value of $15,000 was used last year for backing in the works under construction on the Welland canal. Cement stone was quarried and manufactured into water lime to the value of $15,000. Fifty quarry-men and laborers were employed during 1886, whose rate of wages ranged from $1.25 to $2 per day. The works are close to the Welland canal and the Grand Trunk railway, and have good shipping facilities. The water-lime has been sold chiefly to the contractors on the Grand Trunk and the Welland canal, and to dealers in Toronto.

Hastings & Ruddell's Quarry.—This quarry is near Battle's and has an area of five acres. It was worked from June until October in 1886 by C. H. Raynor & Co., contractors for works on the Welland canal. The rock is a grey limestone, and the stratum has a depth of 12 feet; 2,500 yards of dimension stone, and 1,200 yards of rubble were quarried and used on the Welland canal enlargement. The price of

dimension stone was about $6 per yard and the rubble $3 per yard f.o.b. Seventy quarry-men and laborers were employed, the rate of wages ranging from 15 cents to 20 cents per hour; stone-cutters were paid $3.50 per day.

Johnston's Quarry.—This quarry is situated on lot 14, concession 10, in the township of Grantham, county of Lincoln, and is owned by Dr. R. J. Johnston. It has an area of about 20 acres and presents about 600 yards of opening. There is an earth stripping of six feet, and on the south and east sides is a layer of five feet of grey limestone covering a stratum of cement stone whose depth could not be ascertained, as it has not been sufficiently worked to reach the bottom. On the north side is a stratum of red sandstone about ten feet in depth. The stone when quarried is somewhat soft, but becomes hard when exposed to the weather. Beneath the red sandstone on the north side is a layer of cement stone. This was first opened about 25 years ago by Mr. Goodenough, and was worked at intervals by him for ten years. From the stone quarried he also manufactured a mineral paint. After his death the work was carried on for a time by Mr. David Corbin and about five years ago by Mr. W. Patteson, who took from the quarry the red sandstone used in the erection of the Merritton public buildings. Subsequently Mr. Smith quarried building and paving stone which was shipped by water to Toronto. No operations were carried on in 1886. All the stone in the ravine is cement stone and only requires three feet of earth stripping to reach it. The shipping facilities are excellent by rail and water. The quarry has been rented and is now being worked by Messrs. Thomas, Gallagher & George.

Gibson's Quarry.—This quarry is situated on the 3rd concession of the township of Clinton and has an area of 35 acres. It was opened about five years ago by Mr. Robert Gibson and was subsequently purchased by Mr. Wm. Gibson. Another quarry was opened on the property last year. On the old quarry the stripping varied from four to ten feet in depth, and the layer of hard grey limestone is about five feet in thickness. On the new quarry there is only a few inches of earth covering the rock, and the stratum of grey limestone is 12 to 13 feet deep. During 1886, 7,200 yards of dimension stone valued at $43,200 were taken out, but no rubble was handled. Employment was given to 93 men, stone-cutters being paid $3.50 per day, quarrymen $1.50 to $2 and laborers $1 to $1.50. A tramway is used to convey the stone to Beamsville station on the Grand Trunk railway, a distance of about three miles. The stone is used on the works contracted for by Mr. Gibson on the Grank Trunk and on the Welland canal.

Hagerty's Quarries.—These quarries are situated in the township of Elizabethtown, one and-a-half miles east of Brockville, on the Prescott road, and are the property of Mr. Albert Hagerty. Two quarries are worked within half a mile of each other. The lower quarry is about 60 rods back from the river and the upper one about 80 rods. The rock is level, covered with but a few inches of soil, and is quarried from the surface. The lower quarry was opened last spring. It is a blue limestone in layers of from two to ten inches in thickness. The top bed is light in color, hard in texture, and is a mixture of sand and lime. The lower beds are blue, and the rock is nearly pure lime. About 300 cords were taken out during the season, equal to 38,400 cubic feet. The upper quarry has been worked off and on for about half a century. Mr. Hagerty acquired it fourteen years ago and has been working it continuously since. It is a ridge about 200 yards wide, having a swamp on the north side, and slopes southward towards the river. An opening was made on the southern slope and stone has been taken out across the whole front, a width of 30 to 80 yards, to a depth of about eight feet. It is a blue limestone in layers of one to twelve inches in thickness, works easily, and makes a good building stone of its class, having been used largely for that purpose in Brockville. The quantity taken out last season was 51,000 cubic feet, valued at $1,400. The value of the output at both quarries was about $2,400. Four men are employed throughout the year, and the rate of wages is $1.25 per day.

Scootamata Marble Quarries.—These quarries are situated at the junction of the Scootamata and Moira rivers in the township of Hungerford, county of Hastings. The

property consists of 27½ acres, being parts of lot 11 in the 13th and lot 11 in the 14th concessions of Hungerford. The stripping began about three years ago, but active work has been carried on only during the past season, when 15 men and two teams were employed. Three different shades of marble are found in the quarry—salmon color, white and peacock-blue.

Toronto Lime Company's Works.—The works of this company are situated at Limehouse, Acton and Alton, the head office being at No. 70 Esplanade street, Toronto They have been in operation since the year following the building of the Grand Trunk railway, producing common lime and water lime. At Limehouse the railway cuts the rock through layers of the Niagara limestone and Clinton formations, the latter embracing green and brown shales and blue marl which furnish the material for the manufacture of mineral paints. The upper layers of the limestone formation are used in the manufacture of common lime, while the lower layers produce a very good quality of water lime. Two separate yards and sets of kilns are worked at Limehouse, one on the north and the other on the south side of the railway, embracing two draw kilns and nine set kilns. At Acton there are two draw kilns and two set kilns. All the kilns at the three yards are run steadily for eight months of the year, and one or two kilns for the rest of the year. The output of the Acton and Limehouse works last year was 210,000 bushels of common lime, of the value of $26,000. The wood used for firing the kilns is dry pine, cedar and tamarack, worth $1.40 to $1.60 a cord, and about 22 cords are consumed per day. The water-lime is burned chiefly in the set kilns. It is made only in the yard on the south side of the track at Limehouse. The stone is burned slowly to prevent clinkering, after which it is ground in a mill near the kilns, driven by water-power. The output of last year was 6,000 barrels, valued at $7,500. From 27 to 35 men are employed during the working season at Limehouse and Acton, and also for a portion of the time in the winter. Foremen are paid $1.75 and quarrymen and other laborers $1.25 per day.

Rock-View Lime Kilns.—These kilns are situated on lot 4, 6th concession of Nassagaweya, on the line of the Credit Valley railway three miles west of Milton. Two draw kilns have been built at the foot of a high bluff, and about 30 feet above the railway track. The stone for burning is taken from the talus or mass of broken stones which have fallen from the escarpment, the slope from the kilns to the perpendicular face of the bluff being about 500 feet in length. The top of the bluff is said to be about 400 feet above the level of Sixteen Mile creek, which flows through the valley below. One kiln was built in the spring of 1881 and the other in the summer of 1886, but the latter was not opened until about the 20th of September. The kilns are burning day and night, except on Sundays, during 10½ or 11 months of the year. In 1884 the old kiln was closed all winter, but in the winter of 1885-6 it was closed only three weeks. Each kiln is burning 300 bushels per day and the product is sold chiefly in Toronto, although quantities are shipped as far as Peterborough, the price f.o.b. being 15c. per bushel. The total output of both kilns last year was about 60,000 bushels, valued at about $9,000. The works employ fifteen men, the rate of wages being $1.75 for foremen and $1.25 for firemen and laborers. Cordwood costs $1.50 laid down at the kilns, and the quantity consumed is about eight cords per day. Mr. Duncan Robinson of Milton is the proprietor of the works.

Kelso Lime Kilns.—The Kelso lime kilns are situated on lot 3, 5th concession of Nassagaweya, and are owned by Messrs. D. D. Christie of Toronto and David Henderson of Acton. The quarry is about 60 rods south of the Credit Valley railway, four miles west of Milton. There are two draw kilns, the first of which was built in 1883, the second in 1886. Last year work began on the 17th of March, the first kiln turning out five car-loads or 2,000 bushels per week throughout the summer. The second kiln was not fired until the 18th of October, when it produced at the rate of 1,200 bushels per week. A quarry has been opened at the rear of the kilns, and stone of good quality for the manufacture of grey lime is easily taken out. A railway siding has been constructed from the Credit Valley line to the kilns, down which cars run by their own weight, to be

hauled back by horse-power. The lime sells at 15c. per bushel f.o.b., or 14c. cash. The works employ twelve men, one of whom is a foreman at $400 per year, four of them quarriers at $1.25, and the rest laborers at $1 per day. A freestone quarry has been worked near the railway track by the owners of the lime kilns, but the bed was of small area and nearly the whole has been taken out.

Brown's Lime Kilns.—Brown's kilns are situated on Snider's hill, Owen Sound, just below Chalmers' quarry. They consist of a draw kiln and a set kiln which manufacture grey lime, burned from the hard rock of the upper formation as well as from the thinly cleaved limestone below. The output for last year from the 1st of April to the end of November was 30,000 bushels of lime, a market for which was found in Toronto and at ports on the Georgian bay and lake Superior, as well as in the surrounding country. The average selling price of the lime is 12½c. per bushel. The works employ two quarrymen at $1.25 per day and two firemen at $1.50 each. The daily consumption of wood is four cords, the lime product of which is 400 bushels. Wood is delivered at the kilns at $1.75 to $2.15 per cord. The works were opened six years ago with a set kiln, to which was added a draw kiln early last year.

Pearson's Kiln.—This kiln adjoins Brown's, and is the property of John G. Pearson. It was erected three years ago but during the season of 1886 it was worked only a part of the time, having been shut down for repairs. The total output was about 20,000 bushels.

MINERAL FERTILIZERS.

Gypsum Quarries.—The quantity of gypsum mined in Ontario during the past year is estimated at about 5,000 tons. In last year's report Sir William Logan's description of the gypsum beds worked along the Grand river was quoted, and we are now enabled to give more detailed notes in reference to the white gypsum deposit below Cayuga. The bed of gypsum proper is nearly horizontal, dipping slightly to the south. It can be traced in various thicknesses for about a mile and a-half. The eastern edge is the thickest, varying from three to six feet, and averaging about 4½ feet for about a quarter of a mile. Proceeding westward, it thins down to about two feet in thickness, but about a mile from the eastern limit the bed increases to about three feet, and again tapering off becomes too thin to work up to the western limit. The amount of superimposed matter (which is chiefly cannel clay) above the gypsum bed increases as we go west, the bed being 30 feet below the surface at the eastern end, while in the centre it is 45 feet below the surface. Here and there ridges of hard gravel or "hard pan" occur, reaching from the gypsum almost to the surface. Lying on the gypsum bed in places is a rock from a few inches to a foot in thickness, but frequently "hard pan" or cannel clay occur immediately over the gypsum deposit. The cannel clay is a very pure, fine-grained clay, occurring in horizontal layers, and quite free from stones, except at the bottom of the bed where a few may sometimes be found. Excellent tile and brick of a white color can be made from this clay. "Hard pan" is a mixture of stones bound by clay. It is very hard, and difficult to sink through. The bed of gypsum where not protected by rock is in places smoothed or marked with striæ, as if from the action of ice or running water. Though there is constant variation, the following characteristics mark the bed throughout its extent:

Under the top cap of rock before alluded to there is a foot of bluish-white gypsum, then a thin division of shale and from two to three feet of white gypsum, then about two inches of an irregular argillaceous band, below that about one foot of white gypsum, after which a coarser greyish gypsum lies on the "bottom rock," which is a very hard, almost flint-like clay rock some four inches thick. This ends the main bed of gypsum, but below the bottom rock there is a mixture of thin layers of gypsum and clay shales for an untested depth, 16½ feet having been sunk for a well without reaching the bottom. This lower mixed gypsum and shale is somewhat similar to the rock from which the ordinary grey land plaster is made.

The gypsum deposits are in large lenticular masses of many acres in extent. The main bed is uniform in thickness, except where the bottom rock rises into it as a "ball," or where the upper rock and part or all of the bluish gypsum has been denuded; the cannel clay and hard pan in these cases rests directly on the gypsum, which in places is smoothed and striated, showing that erosion of the bed has taken place. The edges of the gypsum masses grow thinner until it is no longer workable.

From the regularity and constancy of the layers of gypsum and dividing bands of rock matter it is very evident that in accordance with the generally accepted theory the gypsum has been deposited in a lake basin, and the bands may be accounted for by extensive refloodings which have brought the argillaceous matter in solution to be deposited on the gypsum below. Beside the two principal horizontal argillaceous bands in the bed there are here and there thin colored streaks of mixed gypsum and argillaceous matter running at all angles as high as 60° through the pure "white crystalline gypsum." All these argillaceous bands are quite distinct from the pure gypsum, and can be separated.

The mining of the gypsum is carried on in a somewhat similar manner to the "long wall" system of coal mining, in faces at right angles to the main levels. A pillar is left alongside the main level to keep up the roof. Timbers are used as a rule along the face of the work, and as the work moves on the roof is allowed to come down behind. The gypsum is blasted out by alternate holes put in from the centre downward, and then upwards. Drills and sledges are used to operate with, though hand-boring machines have been used with indifferent success. The holes are made about 3½ feet in depth, and medium coarse blasting powder is found to be the best explosive. About half a ton is blown loose at a blast, but the quantity varies. The mass is then picked out with a crowbar and pickaxe, if not blown away from the face, and broken up by wedges into pieces which can be handled for shipment on the cars. If the track cannot be brought close to the face of work, the plaster is carried back on wheelbarrows. Two men generally labor together in each working, one drilling and the other breaking up the blasted masses and loading the pieces on the cars. The pair will mine from five to eight tons a day. The mining is done by the ton, at from 50 cents to 60 cents per ton on the cars at the face of work. The cars used carry generally about 3,000 pounds, and a small mule or pony can haul out two or three at a time when the main level is horizontal; but where the gypsum bed is worked by an inclined shaft a horsepower windlass is found to be the best method for hauling out the cars. Laborers about the mines are paid from $1 to $1.25 per day.

A sample of the white land plaster of commerce was obtained from a dealer in Toronto by Prof. Heys, and upon analysis gave—

Calcium sulphate	78.21
Insoluble matter	1.05
Iron and alumina	Trace
Carb. lime and magnesia	Trace
Water	20.70

Chemically pure gypsum is 79.1 per cent. calcium sulphate and 20.9 per cent. water. This Grand river white gypsum has therefore been rightly described by Sir William Logan as very pure.

Apatite.—A number of the small mines in the counties of Frontenac and Lanark were operated by farmers during the past year, the bulk of which product was handled by Messrs. Richardson & Sons of Kingston. The total shipments of this firm amounted to 400 tons, valued at $4,400. At Boyd Smith's quarry near Sharbot lake about 1,200 tons was awaiting shipment at the end of the year, valued at $16,000.

Standard Fertilizer and Chemical Company.—The works of this company, of which Mr. R. J. Brodie is president and manager, are located at Smith's Falls in the county of Lanark. They consist of a brick factory, with engine, boiler and mill, for grinding apatite, and a building for the manufacture of sulphuric acid. All the machinery necessary for the economic production of fertilizers has been set up, Mr. Brodie having

visited similar works in England and the United States before the industry was undertaken at this place. He is a graduate of McGill college and conducts all analytical work himself. He began operations on a small scale five years ago, buying the acid and making a soluble acid phosphate. In 1884 the company was formed, additional buildings erected, and the manufacture of fertilizers commenced on a large scale. Two kilns are in operation for burning brimstone, which is the material used in producing the acid. It is imported from Sicily and costs laid down at the works $1.15 per 100 lbs. Ammonia and potash are also imported, to be mixed with the phosphate—the potash in two forms, muriate and sulphate. The advantage claimed for manufacturing from brimstone is that with it the life of lead chambers is about twice the length of chambers in which iron pyrites is used, and also that about 25 per cent. more acid is made in chambers of the same space. The phosphate is obtained from mines in the township of Burgess and along the Rideau canal, but during the past year the greater portion used at these works was procured from the mines of the Buckingham district in the province of Quebec. About 200 tons of fertilizers were made and sold last year, embracing 60 tons of special, 15 tons of fruit tree, 80 tons of standard and the balance of plain superphosphate. The apatite cost at the factory last year $13 per ton and yielded 15 per cent. of soluble phosphoric acid, equal to 33 of bone phosphate. About 500 tons are being manufactured for this year's market, and Mr. Brodie states that the demand for it is steadily growing. The works employ seven men, all of whom are classed as laborers, and the rate of wages is $1.25 per day. A foreman is employed at $2 per day.

Brockville Superphosphate Works.—These works are the property of the Brockville Chemical and Superphosphate company and are situated in the town of Brockville. The manufacture of superphosphate is carried on in connection with works for the production of sulphuric, muriatic and nitric acids, the buildings of which are located about three miles west of the town. They were established in 1867, chiefly for the production of acids. The fertilizer works are run intermittently, as the demand for the product calls for its manufacture. The company owns a mine of apatite in the vicinity of Perth, from which supplies of raw material are taken. The rock is ground, treated with a weak solution of sulphuric acid, and then mixed with ammonia, potash, etc. The output of 1886 was about 450 barrels of 250 pounds each, valued at $1,800. A portion of it is sold to farmers in the vicinity of the town, but a much larger quantity is shipped to the province of Quebec.

The acids are manufactured from iron pyrites, which is mined near DeKalb, in the state of New York, twenty miles south of Ogdensburg. The works were built in the first instance to manufacture acids from iron pyrites on the ground, but the supply there was exhausted in 1878. The iron costs laid down at the works $5 per ton, whereas the home mine produced it at $2 per ton. The product of last year was an average of 750 carboys of sulphuric acid per week, each carboy weighing 175 pounds and worth about $3.25 in Montreal. In the process of manufacture the ore is broken up and burnt in kilns (26 in number), whence the sulphur fumes are carried by flues into chambers for condensation and thence into retorts where the acid is finished at a strength of 66, commercial. A ton of the iron pyrites will produce ten to twelve carboys of sulphuric acid, according to the proportion of sulphur contained in it, which ranges from 33 to 40 per cent. The muriatic and nitric acids are bye-products of the sulphuric. About thirty men are employed in the works and are classified generally as laborers, although some of them are possessed of a certain amount of skill necessary for the proper treatment of the ore. The general rate of wages is $1.25 per day, but some men of special aptitude are paid as high as $1.75 per day. Last year the works were shut down a month in winter and two weeks in summer for repairs, but the men were employed pretty constantly for the balance of the year.

MINERAL PAINT.

A mill for the manufacture of mineral paint has been erected at Limehouse, on the west branch of the Credit river, and is owned and managed by Mr. James Newton. It was started in 1872 and the works have been carried on continuously since. The material for the manufacture of the paint is taken from various beds of the Clinton formation, within a radius of three miles from the mills. The rock after being quarried is broken into small lumps and spread out on frames or shelves in the open air to be thoroughly dried by exposure to the air and the heat of the sun, after which it is ready for milling. Six distinct shades of paint are made at these works: No. 1, a dark chocolate; No. 2, a light brown; No. 3, a light chocolate; No. 4, a stone drab; No. 5, a stone drab, and No. 6, a metallic oxyd. No. 1 is made from red rock, and all the other grades except No. 6 are ground from ochre earth. The last named grade is a much finer quality of paint than the others, for while Nos. 1 to 5 sell at 75c. per barrel, f.o.b., No. 6 sells at $3.50 to $4 per barrel of 400 lbs. The output of the mill last year was about 600 barrels. Formerly, before the starting of other factories, the output was from 1,500 to 2,000 barrels per annum. The paint is used largely for fences and outbuildings, and is mixed with lead to procure tints of various kinds.

SALT.

The salt industry was fairly active during the year ending October, 1886, and in the report which follows full information has been obtained of sixteen out of the nineteen works in operation. The aggregate produce of these sixteen works, as shown by the statistics given, was 380,661 standard barrels of 280 lbs., the value of which was $231,265.

Dublin Well.—This well is the property of Mr. Joseph Kidd, of Dublin, and is situated on lot 5, first concession of Tuckersmith, five miles west of the village of Dublin. It was put down in 1873, the first stratum of salt being struck at a depth of 1,050 feet, and the boring was continued into the first bed of salt a total depth of 1,150 feet. The evaporating works are in the village of Dublin and the brine is forced to them from the well through a two-inch iron pipe, up a grade of twenty feet to the mile, at the rate of thirty-six gallons a minute. The engine used at the well is a 15-horsepower, and is driven four days and nights of each week. The evaporator consists of one block, 130 by 28 feet, with four fire-holes, and a capacity of 150 barrels per 24 hours. From the 1st of November, 1885, to the 31st of October, 1886, the works were running for seven months, during which the output was 28,143 barrels, valued at $14,271. Two engineers are employed at the well, while at the evaporator there are two firemen, four rakers, two packers and a laborer, all working under charge of one foremen. The foreman and packers are each paid $1.25 per day and the other employés $1 per day. Mr. Kidd has also a well at Seaforth but it has been closed down since March of 1886, owing to a defect in the quality of the brine.

In 1872 a well was sunk in Dublin to the depth of 1,400 feet. At 1,050 feet a salt layer was struck having a thickness of only two feet, but the brine was not of sufficient strength for salt-making purposes. Apparently Dublin is on the rim of the salt layers easterly. At Mitchell, five miles east of Dublin, a well was sunk to the depth of 1,800 feet without any show of brine.

Eclipse Works.—The Eclipse well is situated in the town of Seaforth, and is owned by Messrs. Gray, Young & Sparling. It was put down in 1872 and has been worked every year since. The evaporating works consist of two blocks, and during the past year the product amounted to 11,000 barrels of common salt and 4,000 barrels of land salt, the average selling price of both being about 50 cents per barrel of 280 lbs. The output of this well has been reduced during the past two years owing to a defect in the quality of the brine, so that its running time is only about four months in the year. Twelve

men are employed, three of whom are coopers, and the average rate of wages is $1.25 per day. The well has a depth of 1,150 feet and is pumped by an engine of 20-horsepower.

Coleman's Well.—This well is in the town of Seaforth, and is the property of Dr T. T. Coleman. It was sunk in 1870 to a depth of 1,135 feet. About three years ago certain impurities were found in the brine, supposed to be due to the caving in of the over-lying rock, and the well was sunk to a further depth of 100 feet. There are two evaporating pans with a capacity of 300 barrels per day, and the works are operated for nearly ten months in the year, being usually closed about two months for repairs. Three grades are made, viz., dairy salt, common salt and land salt. The dairy salt is kiln-dried and ground, and put up in bags or packages for the market. About twenty men are employed, of whom there are six coopers paid at the rate of 5½ cents per barrel, eight rakers at $1.25 per day, two firemen at $1.50, an engineer at $1.25, two men in the dairy mill at $1.25, and two woodmen at $1. The price of cordwood ranges according to quality from $1.25 to $3 per cord, and the average consumption is at the rate of one cord an hour.

Ogilvie & Co's. Works.—During the summer of 1885 an evaporating pan was placed in the flouring mill of Ogilvie & Co., at Seaforth. The brine is supplied from the well of Gray, Young & Sparling, and the exhaust steam of the mill is utilized to carry on the process of evaporation. For the year ending 31st October, 1886, the output was 2,025 barrels of common salt and 670 tons of land salt, the total value of which was $2,825. Two men are employed at $1.50 each per day.

Blyth Works.—In 1878 the firm of Gray, Young & Sparling put down a well in the village of Blyth, township of Hullett, on the line of the London, Huron & Bruce Railway. They bored to the depth of 1,210 feet, passing through two beds of salt having an aggregate thickness of about 90 feet. The brine is very clear and salt of an excellent quality is made. Blocks have been set up, and the works embrace in addition a saw-mill, a stave factory and a cooper shop. The pump is driven by an engine of 20-horsepower and the machinery of the mill and shops by an engine of 35-horsepower. Thirty men are almost constantly employed, two of whom are foremen at $10 per week, while the average wage of the other employés is about $1.50 per day. During the past year the output of these works was 12,000 barrels of dairy salt, 35,000 barrels of common salt and 8,000 barrels of land salt, the aggregate value of which was $31,700.

The first stratum of rock at Seaforth and Blyth was struck at a depth of 60 feet from the surface, and at both places the aggregate thickness of the first and the second salt beds is found to be about 90 feet.

Enterprise Works.—The Enterprise works are the property of Mr. F. C. Rogers of Brussels, and are situated about half a mile south of the Maitland river in that village. The well was sunk in 1881, and during the past two years it has been working steadily, with the exception of two weeks, during which it was closed for repairs. The evaporating pan is fired by two furnaces, burning ten cords of hard wood or fifteen cords of soft wood per day. The total output during the past year was 7,400 barrels of dairy salt and 19,000 barrels of common salt. Of the latter 13,000 barrels were sent to market by railway and 6,000 sold to farmers for local consumption, the average price for that grade of salt being 60 cents per barrel. The dairy salt brought a much higher figure, averaging $1.70 a barrel, and the aggregate value of the product of the well was $23,630. Fifteen men are employed at the works, consisting of a foreman at $10 per week, an engineer at $1.50 per day, four rakers at $1.25 per day, a teamster at $1.37½ a day, and two barrel makers at 5½ cents a barrel, each making about 35 barrels per day, two packers at 2 cents per barrel, and three boys. An engine of 20-horsepower is used to drive the pump, and a mill for grading the salt. This mill consists mainly of sets ot sieves through which the salt as taken from the pan is run and separated into three grades according to the size of the salt crystals, thus securing uniformity of size in the crystals of each grade. A large portion of the product of the Enterprise works is sold to meat packers in Toronto and elsewhere.

The Enterprise well, like the Dublin one, is apparently near the outer margin of the salt deposits of the district. Salt was struck at a depth of 1,000 feet, and the boring passed through one bed 23 feet in thickness, but no indication of salt was found below that level, although the boring was continued to a depth of 1,100 feet. Several years ago a well was put down on the north side of the river to a depth of 1,048 feet, and although salt was struck the bed was so thin as to yield brine of non-paying strength.

Rightmeyer's Works.—These works are on the lake shore in the town of Kincardine, on the north side of the Penetangore river, and are the property of Mr. Levi Rightmeyer. The well was bored in 1871 to a depth of 1,000 feet. The first salt bed was struck at 940 feet and was found to be 17 feet in thickness. A bed of shale about 13 feet in thickness separated this from the second bed, into which the bore was sunk 30 feet without reaching its bottom. The plant consists of one pan with three furnaces and a 20-horsepower engine for driving the pump, and operations have been carried on steadily during the past fifteen years, saving a few days of each year when they closed down for repairs. The output of the past year was 70,000 barrels, 50,000 barrels of which were shipped to Chicago for the supply of pork packers (chiefly to Armour & Co.), and the balance of 20,000 found a market in Canada. The total value of the product was $35,000. The works are carried on night and day and employ 25 men. Of these eight are rakers, at $1.25 per day, two are firemen at $1.50, two are engineers at $1.25, five are coopers at 5c. per barrel, and the rest are laborers at 20c. per hour. The fuel used in the furnace consists exclusively of coal screenings, the consumption being at the rate of one ton per hour.

Ontario People's Works.—These works are on the south side of Kincardine harbor and are under Grange management, being the property of a joint stock company of which Mr. R. J. Doyle of Owen Sound is president and Mr. John Tolmie manager and secretary. The property when acquired by the company in 1884 consisted of an old well which had been put down about twenty years ago, and of a second well put down by Messrs. Scott & Grey. The company undertook to open and work the new well, and a whole summer was spent in a vain endeavor to get it into working order. The pump was found to be eaten with rust, and could not be taken up. A third well was then commenced on the same property, and was sunk to a depth of 990 feet. The first salt bed was struck at 920 feet, which was found to be 30 feet in thickness. Below this the bore passed through 20 feet of rock, then 22 feet through the second bed of salt and about three feet into the rock below it, on which the pump rests. The evaporating pan is 191 by 28 feet, and has a capacity of 70 tons a day. Three grades of salt are made, viz., dairy, common and land, but owing to low prices the works have been shut down since the 1st of April, 1886. It is stated that since the Salt Association was broken up certain dealers have resorted to the practice of using barrels of from 200 to 240 lbs. capacity, and are thus enabled to ship carloads of from 100 to 120 barrels at the same rate as the cost of 80 barrels of the standard of 280 lbs. The People's company, it is claimed, does not allow the works to put up barrels of less than the standard, and are consequently unable to maintain the competition with other makers. During the time the works were in operation fourteen men were employed, consisting of a foreman at $2 per day, six rakers at $1.15 per day, two furnace men at $1.50, two engineers at $1.12½, two packers at 2¼ cents a barrel, earning $1.50 per day in summer and $1.25 in winter, and one laborer at $1.12½ per day. The fuel used was principally soft coal dust, the quantity consumed being about twenty tons per day and the cost $2 per ton.

A third well in Kincardine was put down by a joint stock company in 1871 and was operated about three years, but through mismanagement and low prices the business was wrecked and the works have been idle for twelve years. The well is situated on the bank of the Penetangore, a short distance above the harbor.

Wingham Well.—This well is located on lot 41, 13th concession of East Wawanosh, a short distance south of the village of Wingham. It is the property of a joint stock company, organized in the spring of 1886, of which Mr. B. Willson is president and Mr. Robert McIndoo secretary and treasurer. The well was sunk during the summer to a

depth of 1,185 feet. Salt was struck at 1,100 feet, and the boring passed through 30 feet of salt and 55 feet into the rock below. The rock overlying the salt is limestone, the total thickness of its bed being 1,030 feet. The brine is said to be very clear and pure, as the water which dissolves the salt apparently has its source in the limestone. Arrangements to operate the well have been made by the company with Messrs. Gray, Young & Sparling of Seaforth, conditional upon the Canadian Pacific railway building a spur to Wingham from Wingham siding, four miles distant.

A well was sunk in Wingham during 1885, on the bank of the Maitland river, to a depth of 1,600 feet. It passed through beds of shale, mud, limestone, gypsum, etc., the rock formations being almost entirely different from the formation revealed at the new well. A show of salt was found and the well was tested for a considerable time, but as brine of paying strength could not be procured the works were abandoned.

Stapleton Well.—This is one of the oldest works in the Huron district, having been put down in 1867. It is situated about a mile and a quarter east of the town of Clinton and is the property of Mr. Henry Ransford, of England. The total depth of the boring is 1,180 feet. Salt was found at 1,151 feet but only the first bed was penetrated, which has here a thickness of 15 feet. A year or two ago it became evident that the excavation of the bed of salt had resulted in the falling in of the overlying rock, in consequence of which the brine is not now of a quality to produce the finest grades of salt. The works were in operation only four months last year, partly owing to the cause referred to, but chiefly to the low prices and the practice at other works of putting up the salt in barrels of less than standard weight. Mr. Richard Ransford, son of the owner, is manager of the works.

Clinton Salt Works.—The Clinton salt works are located in the town of Clinton, near the railway station. The well was put down in 1870 by a joint stock company and the works were carried on until 1875, when they passed into the hands of Mr. John McGarva, a merchant of the town of Clinton. During the eleven years of his ownership the works have been operated eight years, and were finally closed down in 1885. The total depth of the well is 1,135 feet. Salt was struck at 1,100 feet and the first bed was found to be 35 feet in thickness. The highest price realized for salt at the Clinton works was in 1871, when it sold for $1 per barrel.

Rock Salt Works.—The well of the Rock Salt works is situated on the north branch of the Maitland river in the village of Saltford, adjoining the town of Goderich. it is the oldest well sunk in the Huron district, having been put down in 1865. It was operated for ten years by a joint stock company but was idle from 1876 to 1882 when the property was purchased by Mr. Peter McEwen, who has been running it steadily since except when shut down for necessary repairs. Its depth is 1,000 feet, and it enters the first layer only. A 30-horsepower engine is used in working the pump and driving the machinery of a stave factory. The brine is evaporated in one large pan and during the year ending 31st October, 1886, the output was 20,000 standard barrels, including about 300 tons of land salt. The barrels are made of four different sizes, namely, 220, 240, 260 and 280 lbs., and the salt is put up as ordered by the buyer, who has his choice of sizes. The total value of the year's product was $11,000. When the works are in full running order they give employment to six rakers and two teamsters at $1 per day, two packers at two cents per barrel, earning from $1.25 to $1.50 per day, and six coopers at four cents per barrel, earning about $2 per day. The coopers are employed steadily throughout the year making salt and apple barrels, but in slack times of the salt trade the number of employés at the works is reduced to twelve.

International Salt Works.—The International works are on the lake shore just south of Goderich, being situated on lot 2, con. 1, township of Goderich. The well was sunk by the International company in 1872 and the works were carried on by that company for six years. In 1878 the property was sold to Mr. Joseph Kidd of Dublin, who has been running the works since. The depth of the well is 1,000 feet, and the bore enters the first stratum of salt only. A 10-horsepower engine drives the pump and a dairy mill,

and the exhaust steam is used in drying the salt. There are four evaporating pans with a total capacity of 1,000 barrels per day. For the twelve months ending 31st October, 1886, the output of these works was 35,747 standard barrels of common salt, 5,729 barrels of common coarse salt, 2,894 barrels of dairy salt, and 517 tons of land salt, making a total of 48,064 barrels, which realized $23,904. The dairy salt is put up in sacks ranging in price from $1.50 to $3 per sack. A granulated salt for cheese is also manufactured which is put up in 56 lb., 112 lb. and 224 lb. sacks. This salt is screened and dried at an even temperature by the exhaust steam, and is said to be of excellent quality for its purpose. Thirty men are employed for the whole year excepting a short time at Christmas, when the works are closed for necessary repairs. There are six rakers at $1.25 per day in summer and $1 in winter, four furnace men at $1.25, two engineers at $1.50, ten coopers at 4½ cents per barrel, five packers at 2½ cents per barrel, and three carters at $30 per month. Twenty-six cords of wood and eight tons of coal are used daily when the two blocks comprising the works are running, at a total cost of about $100. The works are managed by Mr. Joseph Kidd, jr., son of the proprietor.

Platt's Salt Works.—These works are in the valley of the Maitland river, within the corporation limits of Goderich. Two grades of salt are made, namely, common and dairy. The dairy salt is screened in a mill which makes two qualities of fineness, table and fine dairy. During the twelve months ending October 31st, 1886, the output of the works was 11,000 standard barrels of common salt and 3,000 barrels of dairy salt, the former selling at 50 cents per barrel and the latter at $1.75. The furnaces of the engine and the evaporating pan consume eight cords of wood at $2.75 per cord and six tons of coal at $3 per ton every twenty-four hours. The working staff is composed of six rakers at $1 per day, three coopers at 4 cents per barrel, two packers at 2 cents per barrel, an engineer at $1.25 per day, four laborers at $1 per day, and one boy and three girls in the dairy mill at 50 cents a day each. The depth of the well is 1,075 feet and the pump and works are driven by a 16-horsepower engine.

Ogilvie & Hutchison's Works.—These works are run in connection with Ogilvie & Hutchison's flouring mills and are situated at the dock of Goderich harbor. The exhaust steam of the mill supplies the heat for the evaporating pan, and one man attends to the works. Only one grade of salt is made, viz., common coarse, which is chiefly sold for land salt. The output for last year was 8,000 standard barrels, valued at $5,200.

North American Chemical Works.—The works of the North American Chemical company are situated in the town of Goderich, and are conducted by Mr. George Rice as manager and chemist. The property was purchased by this company in 1879 and has been worked constantly since. The output of the past year was 25,000 sacks of 224 lbs. each, dairy and table salt, at $1.30 per sack and 4,000 barrels of 240 lbs. common salt at 50 cents per barrel. Four different grades of fine salt are made—three dairy and one table—of different degrees of granulation. Two steam vats with pipes for the manufacture of the choicest creamery and table salt were being put into the works at the time of my visit. The employés are composed of six pan hands at $1.25 per day, an engineer at $1.25 per day, a night-watchman at $8 per week, two dairy millers at $1.50 per day, four laborers at $1 per day, and ten women to make and fill sacks by piece work. The furnace consumes nine tons of coal dust per day, the cost of this fuel being about $2 per ton.

Star Salt Works.—These works are situated near the railway station in the town of Goderich, and are the property of Mr. John Scobie. The well was put down by the Dominion Salt Co. about sixteen years ago and Mr. Scobie became the proprietor in 1880. The total depth of the well is 1,125 feet, and the pump is driven by a 25-horsepower engine. A saw mill and stave factory are also run in connection with these works, the machinery of which is driven by a 30-horsepower engine. Eleven men are employed in the salt works, of whom two are engineers at $1 per day, four rakers at $1 per day, two firemen at $1 per day, two laborers at $1 per day, and one packer at 1¾ cents per barrel. The cooper shop usually gives employment to four men, who are paid at the rate of 4½ cents per barrel. The works are kept in operation about ten months of each year, and

during the twelve months ending with October, 1886, the output consisted of 20,000 barrels of 250 lbs. common salt, which sold at 50 cents per barrel, and 40 tons of land salt at $1.75 per ton. Four cords of wood at $2.25 per cord and four tons of coal screenings at $2.25 per ton are consumed daily.

Hensall Salt Works.—These works are situated in the village of Hensall, in the township of Hay, county of Huron. The proprietors are Mr. George McEwen and the firm of Gray, Young & Sparling. The well was bored about six years ago and was put down to the depth of 1,206 feet. Salt was struck at 1,090 feet, and although the bed was found to be somewhat streaked with shale there was no separation into distinct strata such as are met with in other portions of the Huron salt district. The company which put down the well disposed of it to a second company, organized in 1883, by whom evaporating works were constructed, but owing to mismanagement of the business the property was after nineteen months sold to the present owners. The plant consists of a 20-horsepower engine and boiler, and one pan 26 by 100 feet, heated by three furnaces. The works are in operation about seven months of each year and for the year ending October 31st, 1886, the output was 16,000 barrels of 275 lbs. of common salt at 50 cents per barrel, and 7,000 barrels of land salt at 30 cents per barrel. The employés of the works consist of four rakers at $1.12½ per day, two firemen at $1 and two coopers at 4 cents per barrel. Wood is used exclusively for fuel in the furnaces, the daily consumption being fourteen cords of soft wood at $1.50 per cord.

Exeter Salt Well.—This well is in the village of Exeter, township of Stephen, in the county of Huron. It is the property of a joint stock company of which Mr. George Samwell is president. The well was put down in 1881, its total depth being 1,200 feet. Salt was struck at about 1,100 feet, but one bed only was reached. The salt block was erected in the same year and has been running at intervals ever since. During the past year it was operated only three months—from the first of November, 1885, to the end of January, 1886. The total output of fine and coarse salt was 10,000 barrels, valued at $2,800. the whole of which was sold for local consumption. Seven men were employed at the works: a manager at $2 per day, an engineer at $2, four rakers at $1.25 and two laborers at $1 per day each. Cordwood is supplied to the works at $1.60 per cord.

Excelsior Salt Works.—These works are located in the village of Port Franks, at the mouth of the Sable river, in the township of Bosanquet, county of Lambton, and are the property of Mr. Joseph Williams of Goderich. Salt-making is carried on only during the season of navigation, the works being opened usually in April. The output for last year was 10,600 standard barrels of common salt, the average selling price of which was 58 cents per barrel. There was made also about 150 tons of land salt, which was disposed of to farmers in the district at $3 per ton. The works employ a foreman at $1.50 per day, four rakers at $1.25 each, two firemen at $1.25 each, a teamster and two coopers.

Elarton Salt Works.—These works are located on lot 6, 3rd concession south of the Egremont road, in the township of Warwick, county of Lambton, and are the property of a company of which F. W. Kingstone of Toronto is president, and Mr. Charles J. Kingstone manager and secretary-treasurer. The well was put down in 1870, the place selected for it being in the flats of Bear creek. Its total depth is 1,397 feet. Two beds of salt have been penetrated, the first at a depth of 1,200 feet, 34 feet in thickness, and the second at a depth of 1,239 feet, of 30 feet thickness. A stratum of very hard limestone separates the two beds of salt. The bore was put down 61 feet below the second salt bed passing through three alternate beds of salt and shale, and then for 67 feet into a hard limestone. The works were operated for four months during the past year—from the first of November, 1885, to the end of February, 1886—during which time the output was 2,278 barrels of coarse and fine salt, valued at $1,276, and 337 barrels of land salt valued at $141. The rate of wages at these works is $1.50 per day for salt rakers, $1.75 for an engineer and $1.75 for a foreman. The product goes only into the home market.

Courtwright Salt Well.—This well is near the St. Clair river, township of Moore, county of Lambton, but no statistics of its output have been obtained. In one important respect it differs from all other salt wells of the Huron district, in that the brine is forced up by hydraulic pressure instead of being raised by ordinary pumping. This device is the invention of a machinist of the Petrolia oil wells.

The Lake Shore Salt Association.—This Association was organized September 3rd, 1885, with Mr. Joseph Williams as president. It embraces all the salt works on the lake shore from Courtwright to Kincardine, namely, one at Courtwright, one at Port Franks, six at Goderich and two at Kincardine. Each of the works gets an allotment in proportion to its capacity, and assists in paying the expenses of management in proportion to the amount of sales. All the shipments of the association are made by boat, and a uniform price is paid for each destination. Salt shipped to the Northwest is 65 cents per barrel, for the Georgian bay 60 cents, and for the lake Huron coast 55 cents per barrel.

PETROLEUM.

The oil region of the county of Lambton has two distinct centres, viz., Oil Springs district and Petrolia district. The former extends over lots 16, 17, 18, 19 and 20 in the 1st and 2nd concessions of Enniskillen; the latter embraces nearly the whole north-western corner of the township of Enniskillen lying north of the 9th concession line and west of the line between lots 16 and 17 of the several concessions, lots 1 to 5 in the 12th concession of Moore, and lots 1 to 12 in the 1st, 2nd and 3rd concessions of Sarnia. The wells are found chiefly in a belt ranging from half-a-mile to a mile in width, and extending north-westerly from Petrolia a distance of nine miles. The number of working wells in this district is estimated at 2,500, of which about 500 were put down during the past year. In the Oil Springs district there were 496 wells on the 1st of July, being an increase of 98 since the 1st of January. The total production of crude oil in the Petrolia district for the year 1886 was 425,000 barrels of 35 imperial gallons, and in the Oil Springs district 175,000 barrels, being a total of 600,000 barrels for the whole region. The wells, refineries and other works in connection with the industry employ about 2,000 men, and the population dependent upon it is estimated at about 10,000. In the crude state the average value of oil last year was 90c. per barrel, making the value of the raw material $540,000. Fully 95 per cent. of this was refined in the nine distilleries of Petrolia, and the quantity of refined oil manufactured from the total crude is computed at 230,000 barrels, or about 9,775,000 gallons. At the average selling price of 14c. per imperial gallon which ruled last year, the value of the illuminating oil product of the two districts would be $1,368,500. In former years the price ranged from two to three cents lower, but under the trade regulations the quality of the oil has been so improved that the present prices are now more easily realized than were the lower prices in the period before the organization of the Oil Exchange. The rates of wages undergo but little fluctuation from year to year. Laborers are paid from $1.25 to $1.50 per day, experienced pumping men from $1.50 to $1.75 and distillers $1.75 to $2 per day.

Drilling and Working the Wells.—In the progress of the industry old wells sometimes become exhausted, or the flow of oil ceases in paying quantities. In such cases new wells are put down to strike untapped rock. The boring of wells is consequently an established branch of the industry, from fifteen to twenty sets of tools being in constant use and about 100 men employed. The wells in the Petrolia territory are about 475 feet in depth, and if drilling goes on night and day a well is now sunk in six days. The depth to the rock ranges from 60 to 150 feet, below which come in succession layers of limestone, soapstone, etc. The surface or drift is bored with a spod-auger to admit a ten-inch wooden tube, the lower end of which rests upon the rock. The rock is then drilled with a 5-inch bore to the depth of about 160 feet and a casing of iron 4½ inches in diameter is driven down. This casing is intended to shut out the surface water, which if admitted would prevent the free secretion of the oil and would, by coming into

contact with sulphur deposits, produce "black water," which is very injurious to the iron tubing of the pumps. Moreover, the buoyancy imparted to the tools and cable by the 300 or 400 feet of water is thus avoided, and the presence of oil in any of the strata penetrated is immediately manifested by the soiled tools or escaping gas. The bore is drilled below the casing until oil is struck, and the well is then ready for the pump. This is an iron tube about one and one-half inch in diameter and composed of various lengths, at the end of which is the working barrel resting upon a strainer or perforated iron tube to keep out obstructions of various kinds. In the working barrel are two valves, one of which takes in and the other lets out; and the oil which oozes from the rock, passing through the strainer, is lifted by the pump to the surface. At first wells were sunk in the rock with crib-work and then drilled with a spring-pole. By this process the time required to strike the oil-bearing rock varied from three to twelve months, and the cost ranged from $2,000 to $5,000. Now the well is bored and drilled from the surface, and with the enlarged experience gained the work is better done, the water is shut off more effectually, and the cost is very greatly reduced. The cost, however, is a variable quantity, depending upon the length of casing used to shut out the water and mud veins. Some wells require only 120 feet and others as much as 400 feet, but the average cost of a well with casing and pump complete ranges from $400 to $500. Formerly pumps of three inches diameter were used, costing about $500 each, but now they vary in size from 1¼ to 1½ inches, and cost about $80. In the early days, too, each well had its own engine to furnish the working power, but now the same engine is used to drive twenty or thirty pumps, or even more. A wheel, or circular horizontal table, is connected with the engine by an elbow joint in such a manner that it is made to perform a quarter revolution and return to its former position. To this wheel are attached a number of "jerkers" or poles (usually made of white ash two inches square, with iron connections) by which power is conveyed to a number of pumps extending over a large area, and working the lot simultaneously. By this plan wells that would not otherwise pay running expenses are operated at a profit, and experience here as well as elsewhere has shown that the man who owns a lot has no safety but in getting his oil to the surface.

Distilleries and their Processes.—The nine distilleries are owned as follows: M. J. Woodward & Co., John McMillan, McMillan, Kittredge & Co., Petrolia Oil Co., Imperial Oil Co., Producers' Oil Co., Consumers' Oil Co., John McDonald and P. Gleason & Bro. Another establishment (Dipper's) makes a specialty of recovering spent acids used in the refineries, but it also manufactures a small quantity of oil occasionally. A refinery consists of several stills (three to twenty) set in brickwork, and constituting what is called a bank or bench. Each still is an immense boiler ten feet in diameter and thirty feet long, having a capacity of about 275 barrels. After a bench is charged the furnaces are lighted, the fuel used being the tar or waste of crude oil. When the furnaces are first started a temperature of about 200° is required to convert the oil into vapor, but as the tar product settles a constantly increasing heat is needed, until a temperature of 600° is reached. The vapor passes off through a series of pipes placed into a long tank or condenser into which cold water is being constantly pumped. The water gradually cools the vapor in the pipes, until at the farther end it flows out as distillate. The tar product remaining in the boilers is emptied out usually about twice a week, but sometimes three times. It constitutes about 40 per cent. of the crude, while the distillate makes about 60 per cent. In the further process of refining the distillate is treated with sulphuric acid to take out tarry matters, after which it is washed with water in a solution of caustic soda to take out what remains of the sulphuric acid. It is next treated with an alkaline solution of lead to deodorize the oil, and again with sulphur to precipitate the lead, leaving the refined oil to be drawn off to the bleachers, where it is exposed to sunlight and is finished for the barrelling. These several processes reduce the volume of distillate to 40 per cent. of the crude; in other words, 100 gallons of crude oil produce 40 gallons of illuminating oil. In case the oil fails in the flash test it is steamed in the bleachers, and all explosive gases are driven off. The barrelling is done in the filling shed by Watson's patent filler, two to six being used as the extent or the capacity of the refinery may require. These

fillers are self-regulating, a valve being closed by a ball float when the oil rises to the top of the barrel. The specific gravity and fire test of the oil are marked by the manufacturer, and after these are certified to by the Government inspector it is ready for shipment; otherwise it must be made right. The trade inspection is made by Mr. Kerr, secretary of the Oil Exchange, for the purpose of determining whether the oil is merchantable, of good burning quality, and pure. If it is shipped without Government inspection the penalty is confiscation of the oil and seizure of the works, or such other penalty as the Inland Revenue department may see fit to impose. For neglect of trade inspection the penalty is a fine of three cents per gallon or the closing down of the works. The latter inspection, however, is not under statute, but by agreement among the refiners. For this purpose they have organized a company known as the Refiners' Oil company, which includes all the works. It controls the whole oil business, but chiefly in regard to the quality of the oil, the rateable output in proportion to the several works and the method of marketing. Long experience had taught the refiner that it was impossible to keep up a high standard of oil unless an arrangement was entered into by the producers for that purpose. By agreement or contract with the Financial Association all oils are submitted to the inspection of the Oil Exchange inspector, who is independent of the refiners, and his grading is final. The grades of illuminating oil are three in number, viz.: No. 1, A1 and Extra. A fourth grade, claimed to be superior to all the others, is just now being placed upon the market, the characteristic of which is purity. By the refining processes hitherto in use, although oil could be made superior to any known oil so far as the flame is concerned, yet on account of sulphur and other impurities in the crude which were not wholly eliminated the oil in combustion gave off more or less offensive odors. The new process it is said thoroughly deodorises the oil and removes all impurities, so that it is in no respect inferior to the finest quality of American oil.

Petroleum Bye-products.—The crude oil is composed of a number of hydrocarbons of different gravities and boiling points. In distillation these hydrocarbons separate and come off seriatim as follows: (1) Naphtha, which is too inflammable to be used as illuminating oil. It is set aside and sold in the market, chiefly to paint and rubber manufacturers, although it is also used in other industries. (2) Illuminating oil; and (3) the oils too heavy for illuminating purposes. The lightest of the latter is sold to gas works as gas oil. What remains after the paraffine wax is expressed is manufactured into lubricating oils, wool oils, (which are used to soften wools in carding) vaseline, hair oil, etc. The oils made from this product never become rancid like animal oils, nor poison the blood, nor rust iron. In making paraffine the oil is chilled with ice and the wax is separated under heavy pressure, but machinery is now being put in the works which will separate by a refrigerating process similar to that of ice manufacturing. What remains of the bye-product is known as coke, which makes an excellent fuel for furnaces.

Storage Tanks.—In the first days of the industry great difficulty was experienced in storing crude oil, and in the Oil Springs territory it is estimated that from 3,000,000 to 5,000,000 barrels oil flowed down Bear creek to the great lakes. The first tanks were built into the ground with crib work, at great cost, but about twenty years ago two new kinds of tanks began to be constructed. One of these was a large surface tank of cast iron having a capacity of several thousand barrels; the other was sunk 50 or 60 feet in the ground and lined with inch lumber cut into strips four inches in width, the clay at the back of it being stiff and impermeable. This latter gives the best results, and is the tank in which the great bulk of the crude oil is stored. Three companies have been organized for the construction of these tanks, viz., the Petrolia Crude Oil and Tanking company, the Crown Warehousing company, and the Producers' Tanking company, whose tanks have a total capacity of 600,000 barrels. The crude product of wells within a limit of two or three miles is carted into the storage tanks, but the product of wells beyond that range is pumped into receiving tanks from the several wells or groups of wells, and from these it is forced through pipe lines to the large storage tanks in the vicinity of the refineries.

The Oil Exchange.—The Petrolia Oil Exchange was organized December 1st, 1884, and has a membership of fifty persons, composed of refiners, dealers and producers. Mr.

J. H. Fairbank is president of the Exchange, and Mr. James Kerr secretary. The objects are: (1) To record the market value of oil from day to day; (2) to facilitate the purchase and sale of petroleum oils and other commodities between members thereof; and (3) generally to advance the interests of the petroleum trade in Canada. The entrance fee is $25, and $20 a year thereafter. Meetings are held for half-an-hour daily, at noon. Before the Exchange was organized it was difficult to ascertain the market value of oil, and often on the same day prices fluctuated from four to six cents per barrel, just as happens with the sale of farm products in a country town without a market place. Prices are now regulated by the Exchange quotations, the market is more steady in consequence, and producers get the regular rates. The Financial Association of the Exchange was organized in February, 1886, and began business about the 1st of April. It was formed to promote improvement in the quality of refined oil, and also for carrying the surplus of crude oil stored in the tanks. In the month of October the association had in store 375,000 barrels of crude, held to be drawn as the requirements of the trade demand it. Mr. Fairbank is president of the Financial Association.

Improved Methods and Appliances.—In the early days of the petroleum industry no person in Canada, or indeed elsewhere, knew how to put down an artesian well scientifically. Ordinary mechanics of the other trades had to be employed for the purpose, and progress was never made in this country until the mechanical work was placed in the hands of young Canadians from the rural districts, who with their general aptitude for adapting means to the end were enabled to invent, improve and apply until they have succeeded in reducing the cost of sinking a well from $3,000 to $120, and the time from three (and sometimes twelve) months to six or eight days, and the cost of pumping wells from an average of $6 per day to about 25 cents. The first "jerker" used in America was the invention of Mr. Fairbank in Oil Springs more than twenty years ago, and in his case necessity was the mother of invention. One grand result of this mechanical education of the young men of the oil region has been the opening up of a field for Canadians in every quarter of the world. In the western States, on the Pacific slope, in Australasia, in India, in Burmah, in Beloochistan, in Afghanistan, in Russia, in Germany, parties of young Canadians may be found from time to time putting down wells for water or oil whose training has been received in the Petrolia district. Now and again these parties return home—one from India, one from Russia, one from California, one from the isles of the sea—and they sit down to compare notes and rehearse their tales of experience and adventure. When leaving for foreign parts they start out with a complete equipment of the plant required for drilling—boilers, engines, drill poles, drills, bits and tools of every kind, which are made in the town of Petrolia for use at home and abroad. This wide demand is partly owing to the knowledge of the men acquired by British capitalists who had invested in oil stocks, but it is mainly due to the intelligence and skill and knowledge of the men themselves. Every process and progress in the sinking of wells, in refining the oil, in the manufacture of bye-products and in every line of the oil industry may be placed to the credit of the men who got their training in the practical work of the oil fields; little or none of it is due to the men of science. An apprenticeship on the ground was necessary to every operative and mechanic, and the young men from the rural districts brought to their new sphere of labor the intelligence and the mental discipline which they had acquired to a very large extent in our public schools.

Stevenson's Works.—One of the large establishments which has grown up with the oil industry is the Stevenson works, of which William Stevenson is proprietor. These were begun on a small scale in 1867 and have now attained large proportions. The machinery consists of all the latest appliances used in the manufacture of boilers, stills, tanks and portable works, and such is Mr. Stevenson's fame that he has filled orders from Austria, Burmah, Java and other distant parts of the world. He employs from forty to sixty men, and the rate of wages ranges from $2.25 to $2.50 for mechanics and $1.25 to $1.50 for laborers. The works are in constant operation throughout the year, ten hours each day. The yearly value of manufactures in this establishment is about $50,000.

THE IMPERIAL COMPANY.—One of the largest refining works in Petrolia is the Imperial Oil company, of which F. A. Fitzgerald is president, J. L. Englehart vice-president, and Wm. Pratt secretary. The works of this company extend over 45 acres, embracing stills, a cooper shop, a repair shop, tin works, etc., and eight steam boilers are used in driving the machinery of the establishment. The ordinary process of distillation is carried on in two banks or benches, one containing sixteen and the other five stills, the total capacity of which is 8,000 barrels of crude at a run. There is besides a paraffine bank composed of six stills. The cooper shop is furnished with complete machinery for the making of barrels, so that every step in the process from the cutting of staves out of the block to the completing of the barrels is taken through the medium of a machine; the men are only attendants. The tin works have been fitted with plant at a cost of $10,000, and such is the facility for turning out tin vessels that although a large number of cans are required this branch of the establishment is run part time. The cans are almost wholly five-gallon measures, and are put up two in a case for transportation, chiefly to the North-west, British Columbia and the lower provinces. The refinery employs ten men as treaters, engineers and stillmen at $2.50 per day, and thirty labourers at $1.50 per day. There are also employed in connection with the refinery ten boiler makers, bricklayers and masons at $2 per day. In the cooper shop twenty men are employed running the machinery and ten extra men cutting staves, whose rate of wages runs from $1.75 to $2 per day. About twenty men are employed in the paint, repair and filling shops at $1.75 per day. The tin works are run by six men and boys, who are employed a part of the time in other departments.

PIONEER PLUCK.—In the early days of Oil Springs, before a passable road was built to the St. Clair river, or to the Great Western railway at Wyoming, a proposition was made to send a cargo of crude to Scotland for refining. It was late in autumn, and the roads in that district, always bad, were simply one long mire-hole. Oil-men were discussing the project one day when Mr. Fairbank remarked, "Why not use the road nature has given you?" "What do you mean?" chorused half a dozen voices in query. "I mean the creek, of course," was the response; to which a leading man put the test question: "Will you try it?" Thus challenged on his own proposition Mr. Fairbank promptly replied that he would, and operations for the undertaking were at once begun. The oil was put up in barrels to the number of 3,000 or 4,000, which were rolled into the water, and Mr. Fairbank and a gang of men set to work to float them down. The creek was filled with saw logs and timber, and the men were often up to their armpits in the water. On the second morning an unlooked-for check upon the enterprise presented itself—the creek was sheeted with an inch of ice. "May as well give it up; can't do it," Doc. Aikens exclaimed. ("Doc." is now in Detroit, but why he was called "Doc." no one knows.) Mr. Fairbank came up brandishing his handspike and saying: "Dash you, Doc., if I hear 'can't do it' from you again I will down you with this." It was a heavy undertaking, but the men worked like heroes, in the stream and out of it, and the cargo was got down to deep water and put on board a vessel. But the feat was vain, for the ship was lost in crossing the Atlantic.

MINING IN THE THUNDER BAY DISTRICT.

BY THOMAS A. KEEFER, OF PORT ARTHUR.*

The new era of mining on the north shore of lake Superior, and especially in that part of it within the district of Thunder Bay near Port Arthur, may be dated as commencing from the time when the Silver islet mining company suspended work and the Canadian Pacific railway opened for traffic that part of its road between Port Arthur and Winnipeg, in 1883. The subsequent opening of the completed line from Montreal to the Pacific ocean gave a still greater impetus to the mining industry all along the north shore of lake Superior from Heron bay to Port Arthur, and thence westward as far as

*This article was forwarded by Mr. Keefer under date of March 17, 1887, in response to a request for a narrative of mining operations in the Thunder Bay district.—A. B

the Lake of the Woods. In addition to what has been done at the working mines since the railway was opened, considerable prospecting has been going on at various properties lying along the line of railway and within a short distance of it from Heron bay to and including the Lake of the Woods country, but as regards the results of this work there is not sufficient data to embody them in a statistical form in any official report which you may have in view.

In a general way it may be stated that while some efforts proved it unadvisable to continue work on several locations, others were very satisfactory and will lead to the future development of a good many prospects which are likely, with more work and practical development, to become good dividend-paying mines. The greatest drawbacks so far have been the want of sufficient capital to continue the prospecting work on a reasonably large scale. Roads are needed from the line of railway into the interior of the country where several valuable mineral deposits of various kinds are known to exist, and which could be profitably worked if easy communication with them were established.

In this connection I may mention one very notable instance where the want of waggon road communication completely paralyzes all efforts to make mining successful, viz., that of the township of Moss, where our best gold veins are. This township is fifty miles south-west of Savanne station on the Canadian Pacific railway, the only access to which in summer is by canoes over Lac des Milles Lacs (which has been and can be navigated by small steamers) and several small intervening lakes and streams connected by as many portages. A waggon road from Barril portage at the south-western extremity of Lac des Milles Lacs to the centre of the township of Moss, a distance of about twenty miles, would be the means of starting up a number of partially developed prospects in that region of country. Several of these prospects, by the severest tests which could be applied, have been proved capable of becoming good paying mines if road communication were established. In that township and vicinity about 30,000 acres of land have been sold and patented by the Ontario government as mining lands, and this fact of itself shows the regard which many have for that portion of the Thunder Bay district as a mining field. There are several chartered companies owning lands in Moss township which would be of undoubted value for gold if communication with it were established, while many individuals own lands there who are waiting for road communication before starting any development work.

The gold veins of the Moss township region, by repeated assays and comparative tests on ores made at different metallurgical houses and smelting-works and in one instance by mill work on the spot, have been proven to be most remarkable for their steadiness of production in gold as well as in silver. In the case of the mill work, I refer to the results on the ore from the Huronian mine made at its own mill, where the saving has been from $10 to $21 per ton in gold and silver. These were on mill runs upon hundreds of tons of ore taken from the mine as it came without any selection, except to keep from the mill rock the high grade ore which was either rich enough to be distributed among mining men to be shown at exhibitions as specimens of great interest and value, or to be sold direct to smelters. Other mill runs on smaller quantities of the ore from this mine have shown savings as high as $35 per ton in gold and silver. Communication is now beyond doubt the only thing standing in the way of making gold mining in that portion of the district a permanent industry.

Regarding the actual results of work at the locations which are now fairly entitled to be classed as established mines, these chiefly relate to locations in that portion of our district which is known as the new silver region lying west and south-west of Port Arthur, in an entirely different geological formation to that in which the gold occurs. This portion of the district has been partially opened by a good colonization waggon road constructed by the Ontario government. The road has materially aided the development of the silver mines of the district, and is a significant instance of how public road communication assists the efforts of mining men. Before its construction those efforts were feeble; now they are becoming very energetic, and when the mines are sufficiently opened to become steady producers, and the outlay of capital on development work and in the erection of mills and mining plant has ceased, I doubt not but that some of them will make a good record as dividend-paying mines.

The plain, unvarnished story of mining operations here is such a simple one to tell, and has in it so many encouraging features, that one has but to consider it fairly to be convinced of the value of Thunder Bay district as a mining field. It is unnecessary to allude to some failures in past years during a period of wild excitement,—failures which can very well be explained away by men who understand the courses of them, when the record of the Silver islet mine as a producer can be pointed to as a great success in the past history of silver mining in this district. It is difficult to allude to the present working mines without making some reference to that celebrated mine which first made this country famous in silver mining annals.

On a little rock rising out of lake Superior the Silver islet mine was discovered. That mine has produced about $3,000,000 at a cost of less than $2,000,000, leaving a net profit in favor of the mine which in round numbers can be put down at one million dollars. The question arises at once to a thoughtful man, Why should that be the only mine capable of being made a success? There are no reasons why other silver mines equally as rich should not be found in the same geological formation under similar conditions.

Were it more generally known that the Cambrian slates of the Thunder Bay district in which the veins of the Silver islet mine and the present working silver mines occur are similar to the famous silver regions of old Mexico, which the eminent geologist Charles Lyell declared to be the richest known argentiferous region of the world, and that some of the silver and silver ores from our present working mines so closely resemble those from the Batipolas mines of that region that any expert cannot distinguish between them, there would be a greater importance attached to silver mining in this district than has hitherto been given to it. And when, in addition to this, it is known that the geological formation of a part of the gold producing portion of the district is similar to the rocks in which the gold of British Columbia and other countries occurs, it would not be doubted that we live in a district where we ought to find both gold and silver in paying quantities, and where mining if encouraged should be made a great success, especially as the country everywhere shows evidences of so many different volcanic disturbances which have thrown, faulted and fissured the rocks in all directions, thus making arteries, veins and storehouses for the minerals which ought to be found in such rocks, and which undoubtedly do exist in this district.*

Iron has been discovered in different parts of the district and in large deposits, but

* I have extracted from a private report of J. Gray, Esq., an American civil and mining engineer, the following relating to this district: "It is a fact well established now that this region has developed more than double the wealth and in the shortest time and for the least outlay of any silver region in the world. This is not assertion, it is history and accomplished facts. It is now the richest known silver region on this continent. A remarkable feature attends the silver deposits of the north shore of Superior, viz., the tendency in most cases to metallic and massive form, and it may in a short time become the great antitype of the copper belt of the south shore, lying almost immediately opposite it at a distance upon an air line of about 112 miles. Great quantity and massiveness appear to be the prevailing forms in the whole region of Superior in all the known mineral belts, and what adds vastly to its intrinsic value is the ease of access to every portion of the silver region from all the great commercial centres of the world. As to climate and easy access from all the great markets of the world, and commercial centres of this continent in particular, it has no equal in all the history of mining regions. Timber is abundant and cheap for all purposes; water abundant, never-failing and pure; an atmosphere in midsummer whose purity and salubrity would almost stagger the belief of those who have never enjoyed it. And as important as all these together, the country, though a comparative wilderness yet, is one of law, order, peace and protection to person and property, and in my humble and deliberately formed opinion to-day the most favored and promising silver region now known." Charles F. Eschweiler, a well-known mining engineer of Milwaukee, has also expressed his opinion of the resources of the district in the following terms: "Many of the economic minerals are to be found here and in such quantities and richness that if the truth were known abroad you would have many capitalists among you from a distance. The richness of the mineral veins of this country are not sufficiently known among the mining men of America and Europe, or they would soon be worked on a larger scale. You have in the portions of the district I had time to examine almost every prominent and essential feature to make it a great mining country, and what surprises me most is that your own people do not pay more attention to the mineral wealth that surrounds you on every side and which is to be found almost at your very doors. I tell you, sir, your business men will live to see the day, which is near at hand, when they will regret the loss of the opportunities now offering. The mineral wealth and really wonderful resources of the country cannot long be kept hidden from practical men of means. You have here the proper geological formations in which to look for the minerals. You have evidences on every side of you of the disturbances of the rocks which make a mineral country. You have the veins, and in many of them I have no doubt you have the minerals in paying quantities. I did not myself believe the stories of your district before I landed here. I did not expect to see what I have seen. I was a skeptic of your mineral resources when I put foot in Port Arthur. I am now a strong believer in the country, strong in the faith that you are surrounded by one of the most promising mining fields on the face of the earth."

which are so far inland that they cannot yet be made available, and no work worth mentioning has been done on them. When communication is established these iron deposits will be worked.

Zinc in massive form, in the ore known as zincblende or black-jack, was discovered some years ago by an Indian, who pointed it out to the McKellar Bros. and W. Pritchard on what is known as the Zenith zinc mine on location 30 T, north of Nepigon bay. Some preliminary development work which I did on that location in the year 1885 produced about 1,000 tons of zincblende ore still at the mine, which would average about fifty per cent. in metallic zinc; fair average samples drawn and tested by smelters produced over that. It is a grade of ore quite rich enough to be made very profitable if found in large quantities, and if there existed cheap facilities of getting it to water transportation. The development work so far done on this location, although from $6,000 to $8,000 have been spent on it, has only proved what often occurs in mining, viz., that a much larger expenditure is necessary before coming to a final decision as to the value of the deposit. It is not yet known to be on the location in sufficiently large quantities to be made profitable, and only a large additional expenditure can determine that.

Copper has been discovered in the district in its native state as well as in the form of grey copper ore and pyrites, the latter often carrying either gold or silver in addition in sufficient quantities with the copper to be made profitable when the deposits can be reached by waggon road or railway communication. Although past efforts at mining for native copper have not been successful on the north shore, there is every reason to believe that the richness of the copper pyrites ores which occur in the gold-bearing rocks of the district, and which carry gold and silver as well, will eventually make them profitable ores to work. An instance of such a deposit occurs in a large vein near the township of Moss before alluded to, at what is known as the Tip-Top mine, the ore of which carries gold and silver and copper in pyrites. The copper varies from five to twenty per cent., and the gold and silver assays have shown a value in those metals of from $7 to $35 per ton in addition. Some selected samples have assayed as high as $60 a ton in gold, besides the copper which they carried. When there is less copper there is usually more gold or silver, so that the ore on the whole keeps nearly a uniform value, and it is an ore which could best be treated by smelting on the ground. When road communication is established to the township of Moss an effort to work this mine profitably will doubtless be made. Another rich deposit of a similar kind of ore occurs at the Gold Lake property on the north shore, west of Little Pic river, but here the deposit is known not to be so large.

Lead or galena has been discovered in the country surrounding Black bay and in other portions of the district, and in places appears to be massive in form; but, like the iron, zinc and copper pyrites discoveries, the developments do not warrant anyone in saying that mining for lead alone can be made profitable. But as the galena here usually carries varying proportions of silver it will no doubt in the future be in demand for fluxes when smelting works are erected in the district, in which respect the galena veins are of promising value.

Returning again to the working gold and siver mines near Port Arthur, I had better refer to these in the order of their discoveries, subsequent development and present workings, and then no injustice can be done. It is with these working mines and prospects that I am most familiar, as in most cases where sales have been made I directed or was engaged in the development works which proved the mines prior to their sale to the companies now operating them; and as to others in which I had no interest, I have made myself familiar with what has been done at them. I state these facts merely to enable you in some degree to estimate the value of the information I am about to give.

Although it is not definitely known when silver was first discovered by white men in the Thunder Bay district, yet the dates of the first discoveries of free gold and native silver and all the circumstances attending them are well known, for the gentleman who made the first free gold and native silver discovery of known importance in the district is still living in it. I refer to Peter McKellar, of Fort William.

Silver was discovered in this district as far back as 1845, when parties in search of

copper discovered that a grey copper ore found on the Spar Island and Prince's Bay location carried a considerable percentage of silver. It was subsequently found to exist in the ore of the Enterprise mine, now in the township of McTavish. This was followed by the discovery of native silver in the Thunder Bay location by Peter McKellar in the year 1866, and afterwards at the Shuniah (subsequently called the Duncan) mine by George A. McVicar. Then various discoveries followed at Jarvis island and other places, including the discovery at Silver islet by Mr. Morgan, a member of a party in charge of Thomas McFarlane, in the year 1868. This discovery and the large working of that mine which subsequently followed it is the most important in the history of silver mining in this district. It is needless for the purposes for which you desire the information to go through a list of discoveries which are either still mere prospects with no development work worthy of the name, or which with the work upon them produced no satisfactory results, as I believe your object is to get at the facts which relate to the present working mines and promising prospects partially developed which are likely soon to be worked in a much larger way.

Huronian Gold and Silver Mine.—The first active work in mining for the precious metals in a comparatively large and practical way was commenced at the Huronian gold and silver mine, now owned by the Huronian mining company of Ontario, which has its head office at Ottawa. The vein was pointed out by two Indians in the employment of the Hudson Bay company to Peter McKellar, who first discovered that it carried free gold in the year 1871. There was then no road communication to that mine, and in consequence of other difficulties which arose to prevent its immediate working nothing was done except some preliminary development work which proved very satisfactory as far as it went. On the eve of the opening of the Canadian Pacific railway between Port Arthur and Winnipeg in 1882, I procured a bond on the property, then owned by the Jackfish Lake mining company, with the privilege of testing the mine and of purchasing it at the price of $50,000. I associated with me in the undertaking Mr. McKellar who superintended the actual development work of that year, which consisted in taking out from the bottom of the deepest opening (a test pit then found on the vein eleven feet deep, and from the vein where it was exposed at surface, sixty feet distant) a ton of unselected ore which was by Indians packed over the portages and brought in birch bark canoes over the small lakes and streams from the mine to Savanne station on the Canadian Pacific railway. Thence it was sent to New York for mill tests by metallurgical houses there. The whole of this ore from the two places was mixed together, sampled and assayed, and showed a yield of $36.30 gold and $12.93 silver: total value, $49.28 per ton. It was then divided into two lots, and one portion was tested by a practical milling operation by one metallurgical house and the other portion by another. The treatment applied was crushing the ore wet by stamps, and allowing it to flow over amalgamated copper plates to catch what free gold was present. The tailings from the plates were concentrated over a Frue vanner machine. By this process the lowest saving on this ore was $35.66 in gold and silver per ton. An assay of a selected sample of high grade ore taken from the mine yielded $5,971.60 to the ton, of which $4,752.03 was gold and $1,219.57 was silver. Mr. McKellar superintended the taking out and shipping of the ore and was present when the tests in New York were made, and reported the results accordingly. This effected a sale of the mine to the Huronian mining company of Ontario, its present owners, before the bond I had on it had expired. That company paid the $50,000, the cash price of the property, and Mr. McKellar and myself retained a share in the mine as our profit. The capital stock of the company was put at $100,000. The company has expended in building winter roads, in developing the mine and in erecting a ten stamp mill and mining machinery to the present time about $150,000, including the $50,000 paid to the Jackfish Lake company for the property. After the mill was erected Mr. McKellar, who was then manager for the company, made a mill run on the first 100 tons of ore on which he reported a saving of a little over $21 to the ton in gold and silver. All the ore which was subsequently taken from the mines, except the

selected samples, was put through its own mill, and the concentrates produced from this work are still at the mine, with the exception of a few tons shipped for treatment and sale to smelters. I am unable to give the total amount of ore put through the mill, or to state definitely the value of the whole amount of concentrates now at the mine, as no correct record was kept of the quantity produced in the regular course of mining and milling; but we know that these concentrates when sampled and treated there, or shipped and sold to smelters, will yield several thousand dollars. In 1885 I became manager for the company and had another test made under the superintendence of a competent mining engineer of long experience and an expert mill man. This was a test of eighty-seven tons, which I had taken from all the underground workings of the mine in the regular course, without any selection except to pick from the ore going to the mill any that showed itself rich to the eye. In this test everything hoisted out of the mine went to the mill except the rich specimens referred to, and it was estimated by the men in charge that more than one-half of what went to the mill was composed of talcose and chloritic slates (the country rock) which came from a rib of them which occurs in the centre of the vein, and from portions of the walls broken down by the blasting in the works. These slates could easily have been thrown aside, and probably would be in the ordinary working of the mine; but by making no selection of that kind I considered that the test would be a severe one, and so it was. The saving from this mill run, which was the lowest of any of which any record was kept, was $10.50 per ton. That established the fact that if the township of Moss is supplied with a waggon road from Barril portage, to avoid having to pack in supplies and keep communication open in summer by Indians and canoes, this mine can be made a permanent industry in the country. Work has also been done on this vein on another company's property and tests applied which have been satisfactory. If not the richest property of the district, it can safely be said that no other property has proved more reliable in production and yield, and it is well known that mines of low grade ores are often the more lasting and constant.

The Huronian mill is equipped with a forty-five horse-power boiler and engine, rock breaker, ten stamps in two batteries, amalgamated copper plates for catching the free gold, three Frue vanners for concentrating the tailings and all necessary mill appliances, and it was in perfect working order when shut down in the fall of 1885. To the mill there is a saw mill attachment for cutting lumber required at the mine. At the main shaft there is a good ten horse-power hoisting engine and a pump, and everything was left in good order for work to be resumed. Suitable mine buildings have also been erected. There are forty or fifty acres of land cleared around the mine and 600 cords of wood on hand. The developments consist of two shafts, one on the main vein which is the main shaft, 7 x 14 feet or thereabout; the other, a smaller shaft, is on a branch or feeder near its junction with the main vein, which is intended for a winze or air shaft when the connections are made. There are also two levels and a drift about thirty-five feet in length, with a cistern for catching surface water. The main shaft is sunk to a depth of about 150 feet and the other to 60 feet. About 300 feet of drifting has been done on the vein underground. The vein has been exploited and test pits sunk at intervals for about half a mile, and it has been reported as having been traced for several miles. The average width of the vein is about five feet. The minerals contained in the quartz gangue consist of free gold, sylvanite (the true telluride of gold and silver, the richest and rarest ore of gold and silver known to the miners), iron and copper pyrites, galena and a little zincblende. The gold and silver are also found in union with these sulphurets. It is the only mine I know of in the Dominion which carries the rich sylvanite ore, which I believe is only found in a few countries in the world. The portion of free gold saved by the free milling process varies according as to whether the gold is free in the quartz or in union with the sulphurets. On the whole only a small percentage is saved by free milling, the chief saving being by concentration. When running the free milling apparatus in connection with the concentrators the daily capacity of the present mill is about fifteen tons of ore; but by abandoning the free milling process, which in time will likely be done, its capacity can be raised to twenty tons daily. The quartz from the mine is silicious, but it breaks well and is an easy ore to mill.

The Highland Mine.—This mine is owned by the Highland mining company, and adjoins the Huronian mine. Openings were made in 1884 and 1885, consisting of a series of cross-cuts and test pits at intervals for a distance of over a thousand feet on the course of the vein. These developments resulted in showing that the vein carries the same kinds of ore as are found in the Huronian mine. Various assays yielded from $8 to $310 in gold and silver to the ton.*

The Partridge Lake Gold Prospect.—This is a property which I partially developed in 1885. It was pointed out by an Indian to Mr. Archibald McKellar, of Fort William, since deceased, shortly after the discovery of the Huronian mine in 1872, but as it is yet only accessible by canoes across Lac des Milles Lacs and small streams with intervening portages, nothing can be done towards working the property in a large way. It is situated in the gold bearing rocks of the country similar to those at the Huronian mine, and is about fifty miles north of it. The tests showed it to be a free milling gold ore, and it could be worked with profit if there was a road to it. Four assays were made of ore selected at different times by different parties, which yielded from $25 to $30 per ton in gold. These assays are remarkable for their uniformity in value; but the same can be said of most of the assays which have been obtained from gold-bearing veins in that formation, and especially in that region of country.

The Kam-Kam Gold Prospects.—These prospects are about six miles north-east of Kaministiqua station, and about thirteen miles from Port Arthur in a straight line. I had a waggon road constructed to them in 1885 from the Dawson road, a distance of about six miles, built a house and blacksmith shop and sunk a shaft about fifteen feet on one of the veins. An assay of the ore yielded $27 a ton in gold. There are eighteen known auriferous veins on the property.

The Tip-Top Mine.—This mine is situated on Round lake, near the township of Moss. It is a strong lode of massive copper and iron pyrites, carrying gold and silver. I partially developed the property in 1885 with captain McPhee in charge as superintendent. The developments consisted of uncovering and cross cutting the vein at intervals for several hundred feet and sinking a few test pits on it. I spent several hundred dollars on the work—probably $500 would cover it.

The Rabbit Mountain Silver Mine.—This mine is now owned by the Rabbit Mountain mining company of Ontario, with its head office at Port Arthur. It was pointed out by an Indian to Oliver Daunais in 1882, or, rather its location was so accurately described by the Indian that Mr. Daunais had no difficulty in finding it. At that time there was no road into that section of country, and nothing was done with the discovery except to get the land surveyed and patented until the fall of 1883, when I undertook its development on behalf of the owners. The silver was first discovered in a small branch of the main vein. Under the supervision of Daniel McPhee and Mr. Daunais, two of the original owners, I commenced the development work by starting a shaft on the main vein, where no silver was visible at the surface. From the first ten feet of this shaft there was taken out a carload of ore which I shipped and sold to smelters. This ore yielded $645.41 per ton in silver. A lot of 5,580 lbs., which was taken out from the branch vein in the preliminary development of it, I also shipped

* Under date of February 22nd, 1884, Dr. Selwyn of the Geological Survey furnished me with an analysis of samples of quartz which he had collected from the openings made on this vein: "The average result gives 6.497 oz. of gold and 26.129 oz. of silver to the ton of 2,000 lbs. This must be regarded as a most exceedingly satisfactory showing, and fully justifies further judicious expenditure in opening up the vein and having a practical test made of larger parcels of the quartz." Again, under date of April 29th in the same year, he wrote to me as follows: "I consider the continuation of the vein which traverses the adjoining Huronian or old Jackfish property already proved to be exceedingly rich in sylvanite and gold. Both these properties are exceedingly favorably situated for working. From the five small openings made on the vein in the Highland property I took samples which appeared to represent the average character of the vein through a length of 300 yards. These were carefully assayed in the geological survey laboratory, with the very promising result given you in my letter of the 22nd February last. There can be no doubt that this is as rich a gold-bearing vein as I have yet seen in the Huronian rocks, and the country rock, a rather soft chloritic schist, will greatly diminish the cost of extracting the vein. The greatest difficulty I should apprehend is in the separation and the saving of the whole of the gold contained in the ore, and very great care will have to be exercised in this respect."

separately, and it yielded a net return of $2,178.66, or 775 ounces of silver per ton. This development resulted in a sale of the mine. The original price agreed on was $200,000, but afterwards, on forming the Rabbit Mountain mining company of Ontario in 1884, the owners agreed to take part of the purchase money in stock. The nominal capital stock of the company was placed at $2,000,000, and the stock issued as fully paid up, and was divided among the original owners and those who furnished the working capital. The vein was traced into the adjoining location 40 T, a part of which is operated by a syndicate who have a lease of the Rabbit Mountain mine proper, although it should be considered as one property. On the land owned by the syndicate a five stamp mill is erected. It has been run on ore from both properties which has yielded good results, and shipments of carload lots of smelting ore have been made which have yielded high returns. The veinstone carries native silver and argentite in nuggets and in leaf silver, and also some argentiferous zincblende and galena, with a little iron pyrites. The mill is not working at the present time owing to temporary failure of the water supply. With a proper plan of working this mine it ought to be a large producer and yield satisfactory returns on the capital invested. Large quantities of rich ore are now in sight in the underground workings of the vein, and besides what has been milled and shipped and sold to smelters and turned into bullion at the mine and an unknown quantity of a lower grade of mill rock on the dumps, there is now at the mine about 200 tons of rich ore estimated by the superintendent to be worth over $100 per ton.

The discovery of the Rabbit Mountain mine led to the discovery in the order named of the Rabbit Mountain Junior prospect on an adjoining location, Silver Creek, Porcupine, Beaver, Little Pig and Silver Mountain mines, and these discoveries led to those of the Crown Point, Silver Bluff, Silver Hill, Silver Falls, French's, Pallisades, Sunset Lake, Indian, Peerless, Elgin and several other prospects of which I am unable to ascertain names, on which more or less work has been done.

Porcupine Mine.—The property next developed after work was started on the Rabbit Mountain location was the Porcupine mine, then called the Twin City. This property is owned by captain McPhee, Mr. Daunais and myself. The development work was commenced in 1884 and has been prosecuted at intervals since that year until last fall, when work was suspended pending negotiations for its sale. The mine when work was stopped was considered sufficiently developed, tested and proved to be taken in hand by a company with a sufficient capital to work it in a large way. Over $10,000 has been expended in the development work and in building houses and roads in connection with the mine, and although I am unable now, owing to the destruction of papers and records by fire, to give you the exact returns from the mine, there is a balance in its favor in the hands of the original owners. More silver ore has been taken out of it and sold than was expended in connection with its development.

The Beaver Mine.—This was the next upon which development work was commenced in the fall of the year 1884. I directed and had charge of the work at this mine, with Captain McPhee as superintendent, from the time it was commenced until an interest in it was sold to Mr. R. G. Peters of Manistee, Michigan, in the fall of 1885. The first owners were Mr. McPhee and Oliver Daunais (the original discoverers), W. H. Furlonge and myself, on whose behalf the mine was developed prior to the interest in it being sold to which I have referred. At the time of the sale of this interest a road had been cut out through the woods from the Rabbit mountain to the Beaver mine, and these two mines were connected by other similar roads with the Porcupine and Silver Creek mines. There was then on the Beaver location a log cabin for the miners, a small log stable and blacksmith shop. The work done to that date consisted of two drifts on the vein from the north side of the bluff, one about fifty and the other about 220 feet long, and a drift on the vein from the south side of the hill about forty feet long. The vein had been exposed by stripping it from the top down to the first level from the north side, and here a few tons of the vein rock had been stoped out. This ore was shipped and sold to smelters and yielded something like $270 per ton in silver. In this condition F. S. Kirkland (Mr. Peters' manager) found the mine, and through negotiations carried on by him in 1885 Mr. Peters acquired a half interest in the property on condition of his paying to the owners

the $4,000 which they had spent in its development, and expending a certain sum in further opening the mine and erecting a mill with a capacity of twenty stamps. In the following year Mr. Furlonge, captain McPhee and myself sold the balance of our interests to Mr. Peters, and he with Mr. Daunais are, so far as I know, the present owners of the prorerty. This mine at the present time has by far the largest and most interesting development of any working silver mine in the Thunder Bay district. The mill has been erected, suitable mining machinery is in operation, convenient buildings have been constructed, and many improvements have been made. There is at the present time many thousands of dollars worth of ore out, and probably as much more in sight in the mine. The present showing of this and the Rabbit Mountain and Porcupine mines are as good as the most sanguine mining man could expect. The first two have by far the larger quantities of ore on the dumps and in sight, as their developments are the greater, but in all three an abundance of rich smelting ore and good mill rock is visible.

The Silver Creek Mine.—Developments at this mine followed those of the Beaver. Work was commenced in 1885 under my direction, with captain McPhee as superintendent. The original owners were Oliver Daunais, the discoverer, captain McPhee and myself. Mr. Peters acquired an interest in the fall of 1885, after which time Mr Kirkland had charge of the work under the superintendence of captain Richard Crow, now superintendent of the Huronian mine and who for several months was superintendent at the Beaver mine. The original owners had a road cut out of the mine, a log cabin built for miners and a drift run into the side hill on the vein a distance of about fifty feet. The developments to date consist of a shaft about sixty feet deep and a drift on the vein about 100 feet long. From these workings some very rich ore was taken out, the greater part of which was mixed up with the ore from the Beaver mine and has either been treated with it at the Beaver mill or is still in the possession of the owners of that mine. The exact yield cannot therefore be given, but this ore, together with what is on the dumps of the mine, would about equal in value the expenditure made on the property, which has not exceeded $3,000. Rich ore is now in sight in the bottom of the shaft. Work was suspended last fall in consequence of the time of the manager being fully occupied with affairs at the Beaver.

Rabbit Mountain Junior Mine.—Simultaneously with the work being commenced at the Silver Creek mine, development work was started on the property known as Rabbit Mountain Junior mine under my direction, with captain McPhee in charge as superintendent. This prospect was originally owned by Mr. Daunais, captain McPhee, Mr. Furlonge and myself. Mr. Peters became part owner of the property at the same time that he became interested in the Beaver and Silver Creek mines. Since then he has purchased the interests of Mr. Furlonge and captain McPhee, and the mine is now owned by Mr. Peters, Mr. Daunais and myself. The developments consist of a shaft sunk on the vein to a depth of about seventy-five feet. When work was suspended last fall (for the same reason as at Silver Creek) the shaft had not reached the bottom of the trap overflow of the country, and no silver worth mentioning had been taken out. Silver is not usually found in this district except in the veins opposite the silver-bearing slates, and to reach these the shaft would have to be sunk a few feet deeper. About $2,000 has been expended on the property.

The Silver Mountain Mines.—These mines come next in order of date of development. They were pointed out to Mr. Daunais by the same Indian who indicated to him the location of the Rabbit Mountain mine in 1884. Mr. Daunais associated with him in the eastern half of this discovery Messrs. Richard and John Trethewey, and subsequently they disposed of an interest to Mr. J. Gifford of Silver islet. In 1885 a road was cut out from the Porcupine mine to this property which has since been considerably improved by the Ontario government. In that year the owners did some development work and erected log cabins at the mine, and through captain Richard Trethewey's instrumentality a Cleveland company, under an option of purchase of an interest, expended about $10,000 in development work, buildings, etc. This company, however, discontinued work the same year and in 1886 an English company, known as the Silver Mountain Mines company (limited), of Liverpool, purchased the property and are now working it. Prior

to the sale to the last named company considerable quantities of very rich silver ore and native silver were extracted from the vein.

While work was going on at the east end of Silver Mountain mine some developments were also made on the west end of the property, which was then owned by Mr. Daunais alone. The development work consisted mainly of a shaft sunk about thirty feet deep, from which a carload of smelting ore was shipped that yielded $145 per ton in silver. The mine is closed at the present time owing to intricacies into which the title has been plunged. It is considered a most valuable property.

Crown Point Mine.—Shortly after the Silver Mountain mines were discovered the Crown Point mine adjoining was located and work commenced on it by its owners, Messrs. Cummings and Montgomery. The former lives in Duluth and the latter at Silver Mountain. Considerable work has been done on the property, with very encouraging results.

Many other properties have been located in this vicinity on several of which some development work has been done, but I could not without a further inspection of them give you the actual results.

Little Pig Mine.—The Little Pig mine comes next in order of date. This property is owned by Mr. Daunais and myself. An Indian pointed out the vein to Mr. Daunais, who associated me with him in the discovery. Although development work was commenced in 1885, it was not vigorously pushed forward until last year. Two test pits were sunk on surface outcroppings and three cross-cuts, averaging about 300 feet apart, driven to the vein from the base of the bluff, along the side of which the vein runs. A little drifting has also been done on the vein with very encouraging results. A considerable clearing has also been made. From the work on the vein, after reaching it by the cross-cuts, a few tons of ore have been taken out which are still on the dump at the mine. About $1,500 has been expended in the work done on the property.

The Jarvis Island Mine.—Work was again commenced on this property last year, and it has been prosecuted all through the winter with A. R. McEwen in charge as superintendent.

The Big Bear Mine.—This mine was located last year by Mr. McPhee and myself, who now own it. It is within three miles of the Rabbit Mountain mine. A road has been cut out to the mine, a log cabin built and an opening made in the vein. There are no results to report yet, however, except that five assays of the ore have yielded respectively $8, $12, $20, $40 and $124 per ton.

The Elgin Mine.—Some development work was done on this property last year by Mr. Wm. Margach, crown land agent here, and others associated with him in the property.

Mining Location 3 B.—This location is at Big Trout bay in the township of Crooks, on which $1,500 has been spent in development works. A log cabin has been built and the vein exposed for 300 feet on the top of a bluff or mountain several hundred feet high. A shaft has been sunk about eighteen feet and a drift driven from the side of the mountain near its top on the vein, which is here in a trap dyke. The vein cuts the mountain and the dyke in the center of it. It is the Silver islet diorite dyke which has been traced to the main shore at this point all the way from Silver islet. The dyke extends a considerable distance inland, 6 B, 7 B and 8 B being on the course of it. Geologists say that this and other trap dykes have had much to do with the mineralization of the veins cutting them. No silver worth mentioning was extracted from the work done on 3 B and none is expected until we begin to work in the slates adjacent to the dyke. The property is now owned by Messrs. McKellar, S. R. Clarke and myself. It will be worked again this summer, when better results may be expected, as we will soon be enabled to get at the vein in the silver-bearing slates.

THE ATIC-OKAN IRON MOUNTAIN.

BY PETER McKELLAR, OF FORT WILLIAM.

This great magnetic iron deposit, on locations 10 E, 11 E and 12 E on the Atic-Okan river, lies about 30 miles south-west of Bridge River station, C. P. R., which station is about ninety miles west of Fort William. The ore lode, which is divided into two or three branches in places, as at Iron mountain, has been traced by the out-crops for a distance of nearly four miles along the strike of the formation, with which it appears to conform in dip and strike. The formation consists of the Huronian green chloritic and dioritic schists, with a dip nearly vertical, or about 80° to 85° to the horizon northward. Herein I will describe Iron mountain only, the middle portion of the above run of ore, which is largely exposed and of which the examination was well and carefully made. The ore lode aggregates a thickness of 100 to 125 feet, divided into two and in places three veins by a belt or belts of the green schist twenty to sixty feet in thickness. This with the associated rocks forms a mountain range nearly a mile in length and 300 to 400 feet in width, and that rises to elevations of 60 to 125 feet above the surrounding plain; it therefore presents unusually favorable natural advantages for turning out a large quantity of ore in a short time.

The ore is remarkably uniform in grade or percentage, and is described as follows by Professor Chapman, of University College, Toronto, the leading authority on iron ores in Canada:

The sample consists of fine-grained, comparatively soft black magnetic ore. As shown by analysis the ore is exceedingly rich in metal, holding seventy per cent. metallic iron, with very little silicious rock matter, very small amounts of sulphur and phosphorus, and no trace of titanium. Its specific gravity equals 4.93; hence the weight per cubic foot is equivalent to 307¼ lbs. So far as regards composition and physical characters, a better ore could not be obtained.

Ferrous oxide	29.98 = metallic iron	23.32	70.06
Ferric oxide	66.77 = " "	46.74	
Titanic acid	none.		
Sulphur	0.06 (strictly 0.062)		
Phosphorus	0.02 (strictly 0.025)		
Alumina	0.67		
Silica	2.43		
	99.93		

After the above sample test the deposit was systematically tested by American iron experts who pronounced it first-class in every respect. The lode was closely sampled at several points and different samplings analyzed, none of which showed titanium or sulphur. The percentage of metal was high, being sixty-three to seventy, and the phosphorus low, or 0.011 to 0.035.

The regularity of the stratification of the ore and schists along the surface shows that the ore deposit is not superficial or liable to give out quickly downward any more than it does along the surface horizontally. The lode may change in size a little either way in sinking 400 to 500 feet; but here it will be more likely to be in the direction of an increase rather than that of a decrease, on account of the dip of the outside walls along the middle portion of Iron mountain.

After a thorough surface examination of the Iron mountain lode I estimate the quantity of good ore to exceed two million tons for the 100 feet of depth, or ten millions for 500 feet. I doubt if there is any other known iron deposit in either Canada or the American great iron districts of lake Superior that gives a more valuable show in regard to quality, quantity and the natural advantages presented for mining.

The difficulty in the way of its present development is the distance to a railway or to navigable water. To make the ore available would necessitate the building of a railway branch thirty miles in length to connect with the Canadian Pacific, and negotiations are in progress that promise to result in the commencement of the work at no distant date. So much wealth as is known to exist here, and the great trade its opening would create in the district, are sure to cause the building of this branch before long.

Besides the iron trade the building of the proposed branch would open up other valuable industries in the locality. The rock formation consists largely of metamorphic schists associated with granite, a formation highly favorable for the bearing of metals. Even now although the locality is but slightly known to the mineral explorer, two very promising gold veins (Partridge lake and Osinawe lake veins) have been discovered within a radius of six miles of Iron mountain. There are some good tracts of timber lands in the locality; also farming lands such as that in the grand valley of the Seine river, along which the proposed railway branch would run for the greater portion of its length.

The Huronian and Animikie formations, the iron-bearing rocks of the American iron districts on lake Superior, are largely developed in Canadian territory north of lake Superior and the American boundary.

McKELLAR ISLAND.

Under date of March 17th of this year, Peter McKellar, of Fort William, writes concerning operations carried on last fall at McKellar island. This island lies about two miles to the south of Pie island, at the mouth of Thunder bay. The island contains about five acres of land and is intersected by an immense silver bearing fissure vein which belongs to the same class or system of fissures as that of the far famed Silver islet vein. It was worked for silver by the McKellar Island silver mining company in 1880 and 1881 with promising results, light silver showing well through the works. A shaft was sunk to a depth of 120 feet and tunnels were mined to the extent of 240 feet. Operations were stopped in the fall of 1881 for some reason, probably pending the results of the work then in progress at Silver islet. The latter suspended development work before a satisfactory final issue was reached by reason of a disaster to the mining supplies about the close of the season of 1882, when there was no way for receiving them for the winter, and the work has not since been resumed at either place.

Last year Mr. Daby of Port Arthur leased the island from the company to work the barytes in the silver vein (not including silver or other ores) for a period of five years. He began work in August with a force of thirty to forty men, built a good substantial dock, erected machinery and mined about 2,500 tons of barytes. He shipped about 1,400 tons of this ore to a manufacturer at Wyandotte, Michigan, before the close of navigation, and expects to ship 6,000 to 10,000 tons this coming season. The vein consists of calcareous spar, heavy spar and quartz, with more or less of the ores of silver, zinc, lead, copper and iron. Its width ranges from thirty to seventy feet, rising to elevations of thirty to eighty feet above the water, and its length on the island is about 600 feet. The minerals have a ribbon-like structure in the vein, being arranged in layers more or less regularly and conformable with the walls. Three of the larger barytes layers show each from two to nine feet in width. Though some of the barytes is intermixed with other minerals, to a great extent it is white and of excellent quality. It occurs in great abundance, but requires experience and care in assorting it, as the associated minerals are much like it in colour. It is used extensively in the manufacture of paints, constituting a large percentage of the white lead of commerce.

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